

Date: 30 /05/2023

To,  
The Regional Officer,  
Ministry of Environment, Forest & Climate Change,  
Room No. 407, Aranya Bhawan, Near CH-3 Circle, Sector-10A  
Gandhinagar, Gujarat-382010

**Subject: Half Yearly Compliance to Environmental Clearance of Welspun DI Pipes Ltd.**

Ref.: Environmental Clearance F.No. J-11011/136/2015-IA-II (I) dated 22/03/2021.

Dear Sir,

With reference to the above subject, we are submitting herewith the Half Yearly Environment Clearance Compliance report of Welspun DI Pipes Ltd. Anjar, Kutch, Gujarat for the period of October 2022 to March 2023.

Welspun DI Pipes Ltd. has been commissioned, operational readiness and commencement of regular dispatches from its state of the art Ductile Iron (DI) pipe making plant from October 19, 2022.

Thanking You.

Yours faithfully,

For Welspun DI Pipes Ltd.

Vijay Khanzode  
Vice President Operations



**Encl:** As above

**CC:**

- 1) Gujarat Pollution Control Board, Parayavaran Bhawan Sector-10-A, Gandhinagar
- 2) Regional Office, Central Pollution Control Board, Parivesh Bhawan, Aatmajyoti Ashram Road, Opp.-VMC Ward office No.10, Subhanpura, Vadodara, Gujarat-390023.

## Welspun DI Pipes Limited

7th Floor, Welspun House, Kamala Mills Compound, Lower Parel (West), Mumbai-400013, India.

Tel: +91 22 6613 6000 /2490 8000, Fax: +91 22 2490 8020

E-mail: companysecretary\_wdil@welspun.com Website: www.welspun.com

**Registered Address:** "Welspun City", Survey No.615/1,616,617/1,617/2,618/P,619/P,631/P,632/P,633,634/1,634/2,634/3 and 634/  
Village-Versamedi, Taluka- Anjar- 370 110 T: 02826662222

Corporate Identity Number: U27320GJ2020PLC115329

**Half Yearly Environment Clearance Compliance Report for M/s. Welspun Di Pipes Limited located Village: Versamedi, Tehsil: Anjar, District: Kutch, Gujarat.**

(EC F No. J-11011/136/2015-1A-II(D) dated 22<sup>nd</sup> March 2021)

Sr. No.	Name of facility	Existing Units		Proposed units		Total Units (Existing + Proposed)		Compliance
		configuration	Production MTPA	configuration	Production MTPA	configuration	Production MTPA	
1.	Coke Oven & By products Recovery Plant (COBP)	2 x 58 No. Ovens	1.37	--	--	2 x 58 No. Ovens	1.37	Point noted.
2.	Sinter plant	1x496 m <sup>2</sup>	5.28	--	--	1x496 m <sup>2</sup>	5.28	
3.	Blast Furnace with matching pig casting facility (Along with Pig casting Machine of Capacity )	1x 4300 m <sup>3</sup>	3.34	--	--	1x 4300 m <sup>3</sup>	3.34	
4.	Steel Melt Shop	BOF-2 x 165 T	3.1	(Un proposed) BOF-1x 165 T	(-)1.55	BOF- 1x 165 T	1.55	
		LF- 2 x 165 T						
		VD- 1x 165 T						
5.	Continuous slab casting	1x1 Strand	1.6	--	--	1x1 Strand	1.6 MTPA Slab	
6.	Continuous Billet casting	1x 6 Stand	1.4	(Un proposed) (1 x 6 stand)	(-)1.4	-	0.0	
7.	Rolling Mill Plate & Coil Mill	1 unit	1.37	1 unit	(-)1.37	-	0.0	



8	Captive Power Plant	Gas based	200 MW	--	--	Gas based	200 MW	
9	Lime/dolo Plant	2 x 600 TPD	0.34	(Un proposed) 1 x 600 TPD	(-) 0.17	1 x 600 TPD	0.17	
10	Cement grinding Plant	1 unit	1.5	1 unit	1.5	1 unit	1.5	
11	DI Pipe Plant (Including Induction Furnaces, Converter, Centrifugal Casting Machine, Annealing Furnace, Finishing Line.)	-	-	2 unit	0.5 (2x 0.25)	2 unit	0.5	
12	Foundry Shop for Metal Fitting and other casting using Heating and Melting Furnace (Induction Furnace) and Sand Moulding Facility	-	-	1 Unit	0.1 MTPA	1 Unit	0.1 MTPA	
2	The proposal for part transfer of 0.5 MTPA DI pipe unit in the name of M/s. Welspun DI Pipes Limited Was considered during 28 <sup>th</sup> meeting of the Re-constituted Expert Appraisal Committee (Industry -I) held on 18-19 <sup>th</sup> January, 2021 wherein the committee formed sub-committee. The Sub- committee their report after examination of the following:							
1	"NOC" form M/s. Welspun Metallics Limited							
II	"Undertaking" from M/s. Welspun DI Pipe Limited (WDIPL)							
III	Revised Plant layout with area and green belt detailed by WML and WDIPL							
IV	EC compliance responsibility matrix between WML and WDIPL							

Sr No.	Item	Total Capacity as per EC recommended upper para 7 (ii)	Facilities/ Utilities after amendment in EC and subsequent partial transfer of DI Pipe Plant from EC of Parent Company (WML) to New Company (WDI) New Company (WDI)	Compliance status
A	<b>Title of the Project</b>	Installation of 3.0 MTPA Integrated Steel Plant including 1.5 MTPA Cement Plant and 200MW CPP by M/s Welspun Metallics Ltd., located at Village Versamedi, Tehsil Anjar, District Kutch, Gujarat	Transfer of 0.5 MTPA DI Pipe Plant from EC for Installation of 3.0 MTPA Integrated Steel Plant including 1.5 MTPA Cement Plant and 200MW CPP by M/s Welspun Metallics Ltd., located at Village Versamedi, Tehsil Anjar, District Kutch, Gujarat to WDI	Noted.



Sr No.	Item	Total Capacity as per EC recommended upper para 7 (ii)	Facilities/ Utilities after amendment in EC and subsequent partial transfer of DI Pipe Plant from EC of Parent Company (WML) to New Company (WDD)		Compliance status
			New Company (WDD)		
B	Location	Village Versamedi, Tehsil Anjar, District Kutch, Gujarat Latitude- 23° 6'23"N to 23° 7'53"N Longitude-70° 4'3"E to 70° 5'56"E	Village Versamedi, Tehsil Anjar, District Kutch, Gujarat Latitude- 23° 6'56"N to 23° 7'14.9"N Longitude- 70° 5'22.6"E to 70° 5'34"E		Noted.
C	Units/Facilities				
1.	Coke Ovens & By-products Recovery Plant (COBP)	2 X 58 No. Ovens -1.37 MTPA Gross Coke	-		
2.	Sinter Plant	1 x 496 sq m -5.28 MTPA	-		
3.	Blast Furnace	1 x 4300 m <sup>3</sup> -3.34 MTPA Hot Metal	-		
4.	Steel Melt Shop	BOF - 2 x 165 T LF - 2 x 165 T VD - 1 x 165 T 1.55 MTPA	-		Noted.
5.	Continuous Casting	Slab caster -1 x 1 Strand 1.6 MTPA	-		
6.	DI Pipe Plant (Including Induction Furnaces, Converter, Centrifugal Casting Machine, Annealing Furnace, Finishing Line.)	2 X 0.25 MTPA-0.5 MTPA	2 X 0.25 MTPA-0.5 MTPA		
7.	Foundry Shop for Metal Fitting and other casting using Heating and Melting Furnace (Induction Furnace) and Sand Moulding Facility	0.1 MTPA	-		
8.	Lime/dolo Calcining Plant 1 x 600 TPD	2 x 600 TPD 0.17 MTPA	-		
9.	Power Plant	2 X 100 MW (Gas based) 165 MW BF-TRT, CDQ & Sinter Cooler 35 MW	-		
10.	Cement Grinding unit	1.5 MTPA	-		
D	Process Description	<ul style="list-style-type: none"> <li>Production of coke in Coke Ovens</li> <li>Production of Sinter in Sinter plant</li> <li>Production of Steel through BF-BOF route, with Blast Furnace having hot</li> </ul>	<ul style="list-style-type: none"> <li>Production of DI Pipes using Blast furnace Hot metal from WML followed by desulphurization (if required) and scrap charging</li> </ul>		We are using Hot Metal from Blast furnace for production of DI Pipes through Induction Furnace, Magnesium Treatment, CCM,



Sr No.	Item	Total Capacity as per EC recommended upper para 7 (ii)	Facilities/ Utilities after amendment in EC and subsequent partial transfer of DI Pipe Plant from EC of Parent Company (WML) to New Company (WDD) New Company (WDD)		Compliance status
		<ul style="list-style-type: none"> <li>metal production capacity of 3.34 MTPA followed by 1.6 MTPPA slab casting</li> <li>Power generation through waste heat recovery.</li> <li>Cement Grinding unit based on BF Slag</li> <li>Production of DI Pipes using Blast furnace Hot metal from WML followed by desulphurization (if required) and scrap charging</li> <li>Superheating of molten metal in induction furnace,</li> <li>Magnesium treatment in convertor;</li> <li>Centrifugally casting of pipes using molten metal in CCMs;</li> <li>Heat treatment in annealing furnace to give ductility to the casted pipes;</li> <li>Cement lining, zinc and bitumen coatings &amp; stampings</li> </ul>	<ul style="list-style-type: none"> <li>Superheating of molten metal in induction furnace,</li> <li>Magnesium treatment in convertor;</li> <li>Centrifugally casting of pipes using molten metal in CCMs;</li> <li>Heat treatment in annealing furnace to give ductility to the casted pipes;</li> <li>Cement lining, zinc and bitumen coatings &amp; stampings</li> </ul>	<ul style="list-style-type: none"> <li>Annealing Furnace, Cement Lining, Zinc &amp; Bitumen Coating routes.</li> </ul>	
E	Land Requirement	231.58 ha (77.2 ha -33.3% Greenbelt )	24.5 ha (8.97 ha -33.3% Greenbelt )	Noted.	
F	Raw Material	<ul style="list-style-type: none"> <li>Iron Ore (Fines) – 4.08 MTPA</li> <li>Iron ore (Lump) – 1.91 MTPA</li> <li>Coking Coal – 2.01 MTPA</li> <li>Non Coking Coal – 0.09 MTPA</li> <li>PCI Coal – 0.64 MTPA</li> <li>Limestone – 1.22 MTPA</li> <li>Dolomite – 0.51 MTPA</li> <li>Steel scrap-0.08 MTPA</li> <li>Zinc wire-2600 TPA</li> <li>Fe-si-16800 TPS</li> <li>Mg-6600 TPA</li> <li>Calced Lime-600 TPA</li> </ul>	<ul style="list-style-type: none"> <li>Hot Metal – 0.4 MTPA from WML</li> <li>Steel Scrap – 0.08 MTPA</li> <li>Zinc Wire – 2600 TPA</li> <li>Fe-Si – 16,800 TPA</li> <li>Mg – 6600 TPA</li> </ul>	Noted.	
G	Water Requirement	47232 m <sup>3</sup> /day (1755 m <sup>3</sup> /hr)	4896 m <sup>3</sup> /day	Noted.	



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H	Power Requirement	211 MW	~16 MW		Noted.
I	Fuel Requirement	<ul style="list-style-type: none"> <li>• Coke Oven gas (COG) – 48127 Nm<sup>3</sup>/hr</li> <li>• BF Gas (BFG) – 587155 Nm<sup>3</sup>/hr</li> <li>• BOF Gas (BOFG) – 28310 Nm<sup>3</sup>/hr</li> <li>• Propane – 20 TPD</li> <li>• Fuel Oil – 600 TPD</li> </ul>	<ul style="list-style-type: none"> <li>• BF Gas – 45091 Nm<sup>3</sup>/hr</li> </ul>		Noted.
J	Pollutants	PM – 273.1 Kg/hr SO <sub>2</sub> – 551.8 Kg/hr NO <sub>x</sub> – 869.3 Kg/hr	PM – 14.2 Kg/hr SO <sub>2</sub> – 4.8 Kg/hr NO <sub>x</sub> – 7.3 Kg/hr		Noted.
K	<b>Pollution Mitigation Measures</b>				
I	Air Pollution Control	<ul style="list-style-type: none"> <li>• Dry fogging and bag filter based DE system in material handling</li> <li>• Charging and pushing Emission control in coke ovens</li> <li>• Electrostatic Precipitator (ESP) based process gas cleaning in Sinter plant and CPP</li> <li>• ESP based DE systems in BF Cast house, stock house and SMS</li> <li>• Bag filter based DE system</li> <li>• low NO<sub>x</sub> oxy-fuel burners in Annealing furnaces</li> </ul>	<ul style="list-style-type: none"> <li>• Bag Filter based DE systems</li> <li>• Low NO<sub>x</sub> oxy-fuel burners in Annealing furnaces</li> </ul>	<ul style="list-style-type: none"> <li>• We have installed 5 numbers of Bag Filter based DE systems in Ductile Iron Pipe Plant for controlling Dust emissions.</li> <li>• Complied.</li> </ul>	
2	Noise Pollution Control	<ul style="list-style-type: none"> <li>• Plugging leakages in high-pressure gas/air pipelines.</li> <li>• Reducing vibration of high speed rotating machines by regular monitoring of vibration and taking necessary steps.</li> <li>• Design of absorber system for the shift office and pulpit operator's cabin.</li> <li>• Noise absorber systems in pump houses.</li> </ul>	<ul style="list-style-type: none"> <li>• Plugging leakages in high-pressure gas/air pipelines.</li> <li>• Reducing vibration of high speed rotating machines by regular monitoring of vibration and taking necessary steps.</li> <li>• Design of absorber system for the shift office and pulpit operator's cabin.</li> <li>• Noise absorber systems in pump houses.</li> <li>• Noise level at 1m from equipment will be limited to 85 dB (A).</li> </ul>		Point noted and being complied.



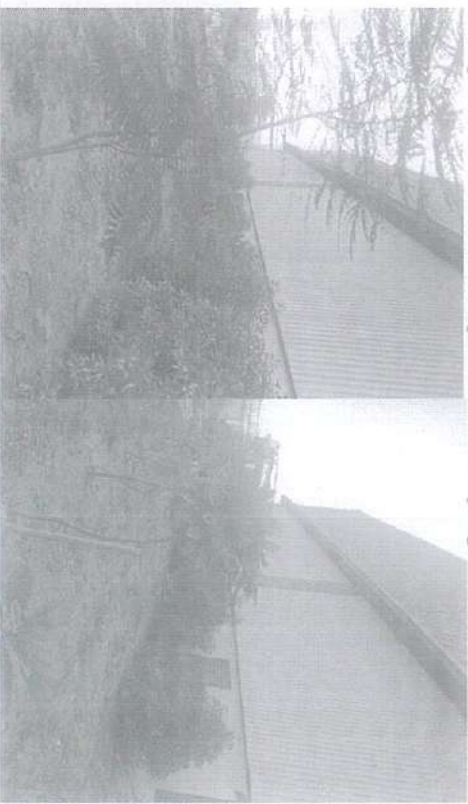
Sr No.	Item	Total Capacity as per EC recommended upper para 7 (ii)	Facilities/ Utilities after amendment in EC and subsequent partial transfer of DI Pipe Plant from EC of Parent Company (WML) to New Company (WDI) New Company (WDI)	Compliance status
3	Effluents Generation And Management	<ul style="list-style-type: none"> <li>Noise level at 1m from equipment will be limited to 85 dB (A).</li> <li>The fans and ductwork will be designed for minimum vibration.</li> <li>All the equipment in different units will be designed/operated in such a way that the noise level shall not exceed 85 dB (A).</li> <li>Periodical monitoring of work zone noise and outside plant premises.</li> <li>Un-manned high noise zone will be marked as "High Noise Zone".</li> <li>In shops where measures are not feasible, attempts shall be made to provide operators with sound-proof enclosure to operate the system.</li> <li>Workers exposed to noise level will be provided with protection devices like earmuffs and will be advised to use them regularly, while at work.</li> <li>Workers exposed to noisy work place shall be provided with rotational duties.</li> <li>All workers will be regularly checked medically for any noise related health problem and if detected, they will be provided with alternative duty.</li> </ul>	<ul style="list-style-type: none"> <li>The fans and ductwork will be designed for minimum vibration.</li> <li>All the equipment in different units will be designed/operated in such a way that the noise level shall not exceed 85 dB (A).</li> <li>Periodical monitoring of work zone noise and outside plant premises.</li> <li>Un-manned high noise zone will be marked as "High Noise Zone".</li> <li>In shops where measures are not feasible, attempts shall be made to provide operators with sound-proof enclosure to operate the system.</li> <li>Workers exposed to noise level will be provided with protection devices like earmuffs and will be advised to use them regularly, while at work.</li> <li>Workers exposed to noisy work place shall be provided with rotational duties.</li> <li>All workers will be regularly checked medically for any noise related health problem and if detected, they will be provided with alternative duty.</li> </ul>	<ul style="list-style-type: none"> <li>WDPL is a Zero Liquid Discharge Plant.</li> <li>We will treat the wastewater in our Common CETP of WIL.</li> </ul>
		<ul style="list-style-type: none"> <li>Zero Liquid Discharge outside plant boundary</li> <li>Effluent generated from coke ovens would be separately treated in Biological Oxidation and Dephenolization (BOD) treatment unit for removal of phenolic compounds and cyanide</li> </ul>	<ul style="list-style-type: none"> <li>Zero Liquid Discharge outside plant boundary</li> <li>Treatment of plant sanitary waste water including canteen effluent in a sewage treatment plant for separation of floating oil and reduction of BOD level.</li> <li>ETP shall be provided for DI plant exclusively with the provision of safe</li> </ul>	



Sr No.	Item	Total Capacity as per EC recommended upper para 7 (ii)	Facilities/ Utilities after amendment in EC and subsequent partial transfer of DI Pipe Plant from EC of Parent Company (WML) to New Company (WDI) New Company (WDI)	Compliance status
4	<b>Solid and Hazardous Wastes</b>	<ul style="list-style-type: none"> <li>• Cooling tower blow downs and treated effluent from BOD plant of coke ovens would be taken to the CETP for further treatment and reuse as make-up</li> <li>• water.</li> <li>• Treatment of plant sanitary waste water including canteen effluent in a sewage treatment plant for separation of floating oil and reduction of BOD</li> <li>• level.</li> <li>• ETP shall be provided for DI plant exclusively with the provision of safe handling of hazardous waste generated in DI plant.</li> </ul>	<ul style="list-style-type: none"> <li>• All non-hazardous solid wastes including Mg dust and Bag filter dust shall be utilized in Sinter Plant of WML.</li> <li>• All other hazardous wastes shall be disposed in secured landfill/ handed over to authorized dealers for disposal as per statutory norms</li> <li>• 100% use/recycle of solid waste generated in DI plant shall be ensured.</li> </ul>	<ul style="list-style-type: none"> <li>• Hazardous waste generated are being collected and disposed at GPCB authorized recycler.</li> <li>• We have provided ETP for Treatment of Effluent water generated from DI plant &amp; treated water is being reused in the Plant.</li> </ul> <p>Point noted and being complied.</p>

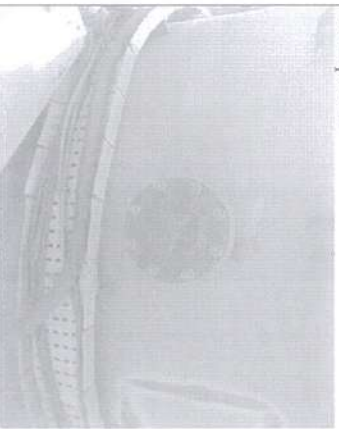




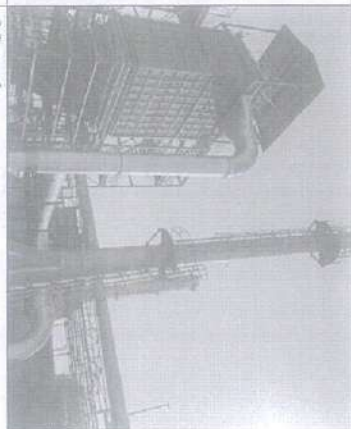
Sr. No.	Conditions	Compliance
1	CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant	We have installed CEMS on all process stacks.
2	Ventilation system for odour control in bitumen coating area shall be included.	Not applicable.
3	Zn dust monitoring in AAQ in DI plant shall. He carried out.	Not applicable.
4	ETP shall be provided for DI plant exclusively with the provision of safe handling of hazardous waste generated in DI Plant.	Not applicable.
5	PM level from the stacks shall be less than 30 mg/Nm3..	Point noted and are being complied.
6	100 % use / recycle of solid waste generated in DI plant shall be ensured.	Point noted and will be complied.
7	Tree density in Green belt shall be 2500 trees per ha. WDI Plant shall have 36.6 % green belt as committed by PP	 <p>We are following the Standards issued by the Ministry vide G.S.R. No. 277(E) dated 31<sup>st</sup> March, 2012 integrated iron and steel plant. Greenbelt development is under progress.</p>
8	Both plants shall have their independent green belts	Point noted and being complied.
9	Validity of split ECs shall be from Feb 2017.	Noted.
10	More efficient bags such as PTFE bags shall be used in the filter bag house and designed for 150% of normal design air flow	Noted.

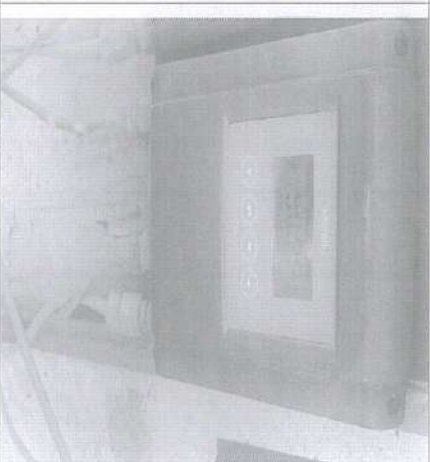


Sr. No.	Conditions	Compliance
11	PP shall use ultralow NOx burner with three stage combustion, flue gas recirculation and auto combustion control system.	Noted.
<b>General condition</b>		
<b>I Statutory compliance</b>		
The Environment Clearance(EC) granted to the project/activity is strictly under the 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.		
<b>II Air quality monitoring and preservation</b>		
1	The project proponent shall install 24*7 continuous emission monitoring system at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) 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.	24*7 Continuous Emission Monitoring System at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters have been installed. The CEMS connection to GPCB online server has been completed & CPCB online server connection is under progress.
2	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.	Point noted and are being complied.
3	The cameras shall be installed at suitable location for 24*7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.	Not Applicable.
4	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	Complied.
5	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards	5 numbers of Bag Filter based DE system has been installed for all the dust generating points.



Sr. No.	Conditions	Compliance
6	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Noted.
7	Secondary emission control system shall be provided at SMS Converters.	Not Applicable.
8	Sufficient number of mobile or stationary vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Noted.
9	Recycle and reuse 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.	Not Applicable.
10	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin	Not Applicable.
11	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).	Not Applicable.
12	Land-based APC system shall be installed to control coke pushing emissions.	Not Applicable.
13	Monitor CO, HC and O <sub>2</sub> in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.	Not Applicable.
14	Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.	Not Applicable.
15	In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NOx control facility shall be provided to meet the prescribed standards.	Not Applicable.
16	The coke oven gas shall be subjected to desulphurization if the Sulphur content in the coal exceeds 1%.	Not Applicable.
17	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Not Applicable.
18	Design the ventilation system for adequate air changes, as per prevailing norms for all tunnels, motor houses, Oil Cellars	Point noted and will be complied.
19	The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter	Not Applicable.



Sr. No.	Conditions	Compliance
20	Dry quenching (CDD) system shall be installed along with power generation facility from waste heat recovery from hot coke.	Not Applicable.
<b>III Water Quality monitoring and preservation</b>		
1	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated Iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Welspun DI Pipes Ltd is Zero Liquid Discharge Plant and Effluent generation from the process is being treated in ETP. Treated water is being reused in the plant.
2	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.	
3	The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated Iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;	Not Applicable.
4	Adhere to 'Zero Liquid Discharge'	Point noted and being complied.
5	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Sewage Water will be treated in our sister concern plant of WIL.
6	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.	Not Applicable.
7	Tyre washing facilities shall be provided at the entrance of the plant gates.	Point noted and will be complied.
8	CO <sub>2</sub> injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.	Not Applicable.
9	The project proponent shall practice rainwater harvesting to maximum possible extent.	Noted.



Sr. No.	Conditions	Compliance
10	Treated water from ETP of COBP shall not be used for coke quenching.	Not Applicable.
11	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Water meter has been installed at the inlet of steel plant. 
12	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Not Applicable.
IV.	<b>Noise monitoring and prevention</b>	
1	Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation And Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	We have provided noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels monitoring report as per the prescribed Noise Pollution (Regulation & Control) Rules, 2000.
V.	<b>Energy Conservation measures</b>	
1	The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.	Not Applicable.
2	Coke Dry Quenching (CDQ) shall be provided for coke quenching for the coke oven plant.	Not Applicable.
3	Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.	Not Applicable.
4	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.	Not Applicable.
5	Use hot charging of slabs and billets/blooms as far as possible.	Not Applicable.
6	Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.	Not Applicable.
7	Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.	Not Applicable.



Sr. No.	Conditions	Compliance
8	Restrict Gas flaring to < 1%.	Not Applicable.
9	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,	Point noted and will be complied.
10	Provide LED lights in their offices and residential areas.	The company has provided LED lights in their offices and residential areas.
11	Ensure installation of regenerative type burners on all reheating furnaces.	Noted.
<b>VI. Waste management</b>		
1	An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.	Not Applicable.
2	Tar Sludge and waste oil shall be blended with coal charged in coke ovens	Not Applicable.
3	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	Not Applicable.
4	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.	Not Applicable.
5	Used refractories shall be recycled as far as possible.	Not Applicable.
6	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.	Not Applicable.
7	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.	Not Applicable.
8	Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	Noted.
9	Kitchen waste shall be composted or converted to biogas for further use.	Point noted & are being complied.
<b>VII. Green Belt</b>		
1	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.	Point noted and will be complied.
<b>VIII. Public hearing and Human health issues</b>		



Sr. No.	Conditions	Compliance
1	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Point noted and will be complied.
2	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 of Factory Act.	We are regularly providing Personal Protection Equipment (PPE) for all Employees as per the norms of the Factory Act.
3	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Point noted and will be complied.
<b>IX. Corporate Environment Responsibility</b>		
1	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA,III dated 30/09/2020.	Point noted and will be complied.
2	The company shall have a well laid down environmental policy duly approved 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.	The company have a well laid Occupational Health, Safety & Environment Policy.
3	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.	A separate Environment Management Cell has been set up, with qualified personnel under the control of senior Executive, who is directly reporting the head of the plant.
<b>X. Miscellaneous</b>		
1	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.	We have already published the EC in two local newspapers.
2	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.	The copies of the EC has already been submitted to all relevant offices of the government.
3	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	The WDIPL has uploaded the status of compliance of stipulated environment clearance conditions, including results of monitored data on the company website and updating the same on half yearly basis.
4	The project proponent shall monitor the criteria pollutants level namely; PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> (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	Point noted and monitoring report has been attached.



Sr. No.	Conditions	Compliance
	put on the website of the company.	
5	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.	Noted.
6	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State pollution control Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	The company will submit the environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V to the concerned State Pollution Control Board on or before prescribed time line.
7	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	Welspun DI Pipes Ltd has operational readiness and commencement of regular dispatches from its state-of-the-art Ductile Iron (DI) pipe making from October 19, 2022.
8	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.
9	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.
10	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.
11	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
12	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted.
13	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.	Noted.
14	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.







# Royal

## Environment Auditing & Consultancy Service

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Ref. No.: 401/11/2022-23

Date: 30/11/2022

### REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 1	Stack No. 2
01	Stack Attached to	---	DN80-400-01, DN80-400-02, DN200-600, DN450-1200 Double station barrel/socket groove/socket bell grinding +socket Zn coating	DI Core Shop
02	Date of Sampling	---	14/11/2022	14/11/2022
03	Time of Sampling	---	9:30	11:00
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter
05	Stack Height	Meter	30	20
06	Stack Temperature	° C	54	45
07	Ambient Temperature	° C	29	29
08	Average Velocity of Flue Gases	M/Sec.	6.9	7.2
09	Isokinetic flow rate for P.M. Sampling	LPM	22	19
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	150	150
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	32	28
13	Permissible Limit for SO <sub>2</sub> *	ppm	100	100
14	Measured Concentration of SO <sub>2</sub>	ppm	1.6	1.9
15	Permissible Limit for NO <sub>x</sub> *	ppm	50	50
16	Measured Concentration of NO <sub>x</sub>	ppm	10.8	9.8

Instruments Used : Ecotech stack monitoring kit ESS - 100,  
Calibration Done On : 27/12/2021

\* Permissible limits as per GPCB CC&A

Royal Environment Auditing & Consultancy Service



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Analyst



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Ref. No. : 402/11/2022-23

Date: 30/11/2022

## REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill : Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 3	Stack No. 4	Stack No. 5
01	Stack Attached to	—	Mg Powder injection system + Induction furnace (3 nos. with two crucibles each, cap:15 Ton each)	DN80-400, DN200-600 Double Stations Barrel Zinc coating system	DN80-400, DN450-1200 Double Stations Barrel Zinc coating system
02	Date of Sampling	—	15/11/2022	15/11/2022	15/11/2022
03	Time of Sampling	—	12:00	14:30	15:45
04	Air Pollution Control Measures	—	Bag Filter (Common Stack)	Bag Filter	Bag Filter
05	Stack Height	Meter	30	30	30
06	Stack Temperature	° C	35	37	34
07	Ambient Temperature	° C	29	30	30
08	Average Velocity of Flue Gases	M/Sec.	8.2	7.1	6.7
09	Isokinetic flow rate for P.M. Sampling	LPM	21	21	19
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	30	30	30
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	24	19	23

Instruments Used : Ecotech stack monitoring kit ESS - 100,

\* Permissible limits as per GPCB CC&A

Calibration Done On. : 27/12/2021

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Ref. No.: 403/11/2022-23

Date: 30/11/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Location No. 1	Location No. 2	Location No. 3
01.	Location of Sampling	---	Nr. Core Shop	Nr. WDI Pipe Yard	Main Entry Gate
02.	Date of sampling	---	14/11/2022	14/11/2022	14/11/2022
03.	Time of sampling	Hr.	09:10	10:30	9:40
04.	Dominant Wind Direction (From)	---	SE	SW	SE
05.	Wind Speed	Km./Hr.	1 to 15	1 to 15	1 to 15
06.	Average flow rate during sampling	m3/minute	1.10	1.20	1.10
07.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
08.	Permissible Limits of PM 2.5 *	$\mu\text{g}/\text{m}^3$	60	60	60
09.	Measured Concentration of PM 2.5	$\mu\text{g}/\text{m}^3$	26.7	25.8	24.4
10.	Permissible Limits of PM 10 "	$\mu\text{g}/\text{m}^3$	100	100	100
11.	Measured Concentration of PM 10	$\mu\text{g}/\text{m}^3$	53.5	54.7	52.1
12.	Permissible Limits of SO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
13.	Measured Concentration of SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	17.6	16.5	14.2
14.	Permissible Limits of NO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
15.	Measured Concentration of NO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	22.4	20.9	21.2

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On . : 27/12/2021

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No.: 404/11/2022-23

Date: 30/11/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Location No. 4	Location No. 5	Location No. 6
01.	Location of Sampling	---	Nr. Finishing Line	Near Canteen	2nd Entry Gate
02.	Date of sampling	---	15/11/2022	15/11/2022	15/11/2022
03.	Time of sampling	Hr.	10:00	09:15	10:30
04.	Dominant Wind Direction (From)	---	SW	SW	SE
05.	Wind Speed	Km./Hr.	2 to 14	2 to 14	2 to 14
06.	Average flow rate during sampling	m3/minute	1.10	1.20	1.20
07.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
08.	Permissible Limits of PM 2.5 *	$\mu\text{g}/\text{m}^3$	60	60	60
09.	Measured Concentration of PM 2.5	$\mu\text{g}/\text{m}^3$	26.2	28.1	27.5
10.	Permissible Limits of PM 10 *	$\mu\text{g}/\text{m}^3$	100	100	100
11.	Measured Concentration of PM 10	$\mu\text{g}/\text{m}^3$	51.7	50.2	52.6
12.	Permissible Limits of SO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
13.	Measured Concentration of SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	15.8	14.9	13.7
14.	Permissible Limits of NO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
15.	Measured Concentration of NO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	24.8	22.7	23.5

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On . : 27/12/2021

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 405/11/2022-23

Date: 30/11/2022

### AMBIENT NOISE LEVEL MONITORING REPORTS

**Name of company : Welspun DI Pipes Limited, (ID:80431)**

**Address** : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 14/11/2022

Sample Collected by : Royal Environment

Sr. No.	Location of Sampling	Results in dB(A)	Results in dB(A)
		(Day Time)	(Night Time)
	<b>Time of Sampling</b>	<b>Day Time</b>	<b>Night Time</b>
		6:00 AM - 10:00 PM	10:00 PM - 6:00 AM
	<b>Permissible Limits</b>	75.0	70.0
	<b>Monitoring is carried out during</b>	11:30 - 12:30 AM	01:00 - 02:00 AM
01.	Sec. Main Gate	64.8	61.7
02.	Pipe Storage Yard	66.2	62.3
03.	Nr. Admin Office	63.7	61.4
04.	Nr. Canteen	64.9	63.4
05.	Nr. Utility Area	68.4	65.7

#### CPCB Standards

Area Code	Category of Area / Zone	Limit in dB(A) Leq.	
		Day Time	Night Time
A	Industrial Area	75.0	70.0
B	Commercial Area	65.0	55.0
C	Residential Area	55.0	45.0
D	Silence Zone	50.0	40.0

Instruments used : Sound level meter, Model : IL - 006719 (Lutron), Calibration Done on : 04/03/2022

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Ref. No. : 406/11/2022-23

Date: 30/11/2022

### WORK ZONE NOISE LEVEL MEASUREMENT

**Name of company : Welspun DI Pipes Limited, (ID:80431)**

**Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.**

Date of Sampling : 14/11/2022

Readings Taken by : Royal Environment

Sr.No.	Location of Sampling	Results in dB(A)
<b>Permissible Limits for 8:00 Hrs.</b>		<b>90.0</b>
<b>Monitoring is carried out during</b>		<b>01:00 to 2:00 PM</b>
01	Zn Coating Area	83.2
02	Core Shop area	80.5
03	CCM area	81.1
04	CML area	77.5
05	Anneling Furnace area	81.6
06	Induction Furnace area	82.4
07	Bitumin Coating area	75.8

Instruments used : Lutron Make Sound level meter, Model No. IL- 006719

Calibration done on: 04/03/2022

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Ref. No. : 407/11/2022-23

Date: 30/11/2022

### ANALYSIS RESULT OF FUGITIVE EMISSION

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 14/11/2022

Sample Collected by : Royal Environment

Sr. No.	Area/Plant	Monitoring Location	SPM Level ( $\mu\text{g}/\text{Nm}^3$ )
Permissible Limit**			3000
Monitoring is carried out during			02:00 to 03:00 PM
01	DI Pipe Plant	Coreshop Area	1548
02		CCM Area	1604
03		CMI Area	1426

Instruments Used : HVS APM 430, Calibration done on.: 28/12/2021

\*\* Permissible Limits are as perGPCB CC&A.

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Ref. No. : 408/11/2022-23

Date: 30/11/2022

### ILLUMINATION LEVEL MEASUREMENT

**Name of company : Welspun DI Pipes Limited, (ID:80431)**

**Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.**

Date of Sampling : 15/11/2022

Readings Collected by : Royal Environment

Sr. No.	Location of Sampling	Illumination Lux (As per standards IS - 3646 Part - II : 1966)	Illumination Day Time	Illumination Night Time
		Monitoring is carried out during 10:30 to 11:30 AM 11:30 to 12:30 PM		
01	Zn Coating Area	300	350	340
02	Core Shop area	300	360	355
03	CCM area	300	390	340
04	CML area	300	365	310
05	Anneling Furnace area	300	375	340
06	Induction Furnace area	300	380	350
07	Bitumin Coating area	300	385	325

Instruments used : Lutron Make Lux Meter, Model No. LX-101A

Calibration done on: 02/09/2021

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Ref. No. : 410/11/2022-23

Date: 30/11/2022

### WATER SAMPLE ANALYSIS REPORT

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 14/11/2022

Source of Sample : Canteen

Sample Collected by : Royal Environment

Sr. No.	Parameters	Unit	Acceptable Limit	Permissible Limits(*)	Result
01.	Color	Pt.Co.Scale	5	15	Colorless
02.	Odour	--	Agreeable	Agreeable	Odorless
03.	Temperature	°C	---	---	30
04.	Turbidity	NTU	1	5	NIL
05.	pH	pH Unit	6.5 to 8.5	No Relaxation	7.21
06.	T.D.S.	Mg/L	500	2000	165
07.	Total Hardness	Mg/L	200	600	45
08.	Ca as Ca	Mg/L	75	200	7.8
09.	Mg as Mg	Mg/L	30	100	6.2
10.	Copper	Mg/L	0.05	1.5	< 0.01
11.	Iron	Mg/L	0.3	No Relaxation	< 0.01
12.	Lead	Mg/L	0.01	No Relaxation	< 0.01
13.	Manganese	Mg/L	0.1	0.3	< 0.01
14.	Chloride	Mg/L	250	1000	35.4
15.	Sulphate	Mg/L	200	400	7.2
16.	Nitrate	Mg/L	45	No Relaxation	3.1
17.	Fluoride	Mg/L	1.0	1.5	0.06
18.	Phenolic Compound	Mg/L	0.001	0.002	NIL
19.	Free Residual Chlorine	Mg/L	0.2	1	< 0.01
20.	Total Alkalinity as Calcium Carbonate	Mg/L	200	600	30.0
21.	E - Coli	Coli	----	----	Absent

(\*) Permissible Limit in the Absense of Alternate Source as per IS 10500 : 2012 Drinking Water Specification

Note: The water is safe to drink with respect of parameters checked above as per IS 10500:2012 standard

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Ashish  
Analyst

Ref. No. : 409/11/2022-23

Date: 30/11/2022

## Form No. 37 WORK PLACE MONITORING REPORT

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e).

- 1 Name of the Department/Plant.: Zn Coating, Coreshop, Anneling furnace area of M/s Welspun DI Pipes Ltd., Anjar, Kutch.
- 2 Raw materials, by products and finished products involved in the process. TOTAL DLST
- 3 Particulars of sampling

Date of Sampling : 15th August 2022

Sample Collected by : Royal Environment

Sr. No	Location Operation monitored	Identified Contaminate	Time of Sampling	Sampling Instrument used	Airborne Contamination			TWA** concentration (As given in Second Schedule)	Refrance Method	Number of Workers exposed at the location being monitored	Remarks	Signature person taking samples	Name (in block letters)
					Number of sample	Range	Average						
1	Zn Coating area	Total Dust			2	1.1-2.0	1.55	10		2	--		
2	CCM area	Total Dust	09:00 to 10:00 AM	Personal Respirable Dust sampler VPDS 203	2	2.1-2.7	2.40	10	Gravimetric	4	--	ASHISH	
3	CML area	Total Dust			2	2.0-2.6	2.30	10		3	--		
4	Anneling Furnace area	Total Dust			2	1.2-1.7	1.45	10		5	--		Mr. PATAT ASHISH

\*\* Permissible limits (TWA) are as per ACGIH Standards.  
Calibration Done On. : 04/03/2022

For. Royal Environment Auditing & Consultancy Service



Royal Environment Auditing & Consultancy Service

*Patat*  
Authorized Sign



# Royal

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Ref. No.: 501/12/2022-23

Date: 31/12/2022

### REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 1	Stack No. 2
01	Stack Attached to	---	DN80-400-01, DN80-400-02, DN200-600, DN450-1200 Double station barrel/socket groove/socket bell grinding +socket Zn coating	DI Core Shop
02	Date of Sampling	---	19/12/2022	19/12/2022
03	Time of Sampling	---	10:00	09:25
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter
05	Stack Height	Meter	30	20
06	Stack Temperature	° C	58	47
07	Ambient Temperature	° C	28	28
08	Average Velocity of Flue Gases	M/Sec.	7.1	6.8
09	Isokinetic flow rate for P.M. Sampling	LPM	21	20
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	150	150
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	35	31
13	Permissible Limit for SO <sub>2</sub> *	ppm	100	100
14	Measured Concentration of SO <sub>2</sub>	ppm	1.5	1.8
15	Permissible Limit for NO <sub>x</sub> *	ppm	50	50
16	Measured Concentration of NO <sub>x</sub>	ppm	11.2	9.5

Instruments Used : Ecotech stack monitoring kit ESS - 100,

\* Permissible limits as per GPCB CC&A

Calibration Done On : 27/12/2021

Royal Environment Auditing & Consultancy Service



Ashish  
Analyst



# Royal

## Environment Auditing & Consultancy Service

Plot No. 19 & 20, B/s. The North Star Nest School, Masoom School Road, Mota Mava, RAJKOT - 360 005.  
Ph.: +91 9099919954 ■ E-mail : royaleenvironment@live.com ■ admin@royalconsultancy.com

Ref. No.: 502/12/2022-23

Date: 31/12/2022

## REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 3	Stack No. 4	Stack No. 5
01	Stack Attached to	---	Mg Powder injection system + Induction furnace (3 nos. with two crucibles each, cap:15 Ton each)	DN80-400, DN200-600 Double Stations Barrel Zinc coating system	DN80-400, DN450-1200 Double Stations Barrel Zinc coating system
02	Date of Sampling	---	20/12/2022	20/12/2022	20/12/2022
03	Time of Sampling	---	11:10	13:30	12:20
04	Air Pollution Control Measures	---	Bag Filter (Common Stack)	Bag Filter	Bag Filter
05	Stack Height	Meter	30	30	30
06	Stack Temperature	° C	35	37	34
07	Ambient Temperature	° C	27	28	28
08	Average Velocity of Flue Gases	M/Sec.	8.0	7.5	7.2
09	Isokinetic flow rate for P.M. Sampling	LPM	19	20	18
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	30	30	30
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	27	21	25

Instruments Used : Ecotech stack monitoring kit ESS - 100,  
Calibration Done On. : 27/12/2021

\* Permissible limits as per GPCB CC&A

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Ref. No.: 503/12/2022-23

Date: 31/12/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Location No. 1	Location No. 2	Location No. 3
01.	Location of Sampling	---	Nr. Core Shop	Nr. WDI Pipe Yard	Main Entry Gate
02.	Date of sampling	---	19/12/2022	19/12/2022	19/12/2022
03.	Time of sampling	Hr.	09:00	10:45	09:35
04.	Dominant Wind Direction (From)	---	SE	SW	SE
05.	Wind Speed	Km./Hr.	2 to 17	2 to 17	2 to 17
06.	Average flow rate during sampling	m <sup>3</sup> /minute	1.20	1.20	1.10
07.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
08.	Permissible Limits of PM 2.5 *	µg/m <sup>3</sup>	60	60	60
09.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	27.8	26.5	28.2
10.	Permissible Limits of PM 10 *	µg/m <sup>3</sup>	100	100	100
11.	Measured Concentration of PM 10	µg/m <sup>3</sup>	53.6	52.8	51.5
12.	Permissible Limits of SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80
13.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	16.5	18.6	17.2
14.	Permissible Limits of NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80
15.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	25.8	22.9	24.6

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On : 27/12/2021

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No.: 504/12/2022-23

Date: 31/12/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Location No. 4	Location No. 5	Location No. 6
01.	Location of Sampling	---	Nr. Finishing Line	Near Canteen	2nd Entry Gate
02.	Date of sampling	---	20/12/2022	20/12/2022	20/12/2022
03.	Time of sampling	Hr.	09:15	10:10	09:40
04.	Dominant Wind Direction (From)	---	SW	SW	SE
05.	Wind Speed	Km./Hr.	1 to 15	1 to 15	1 to 15
06.	Average flow rate during sampling	m <sup>3</sup> /minute	1.10	1.20	1.10
07.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
08.	Permissible Limits of PM 2.5 *	µg/m <sup>3</sup>	60	60	60
09.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	28.8	27.5	26.7
10.	Permissible Limits of PM 10 *	µg/m <sup>3</sup>	100	100	100
11.	Measured Concentration of PM 10	µg/m <sup>3</sup>	52.6	51.4	50.9
12.	Permissible Limits of SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80
13.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	18.5	17.4	16.3
14.	Permissible Limits of NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80
15.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	23.6	25.8	24.7

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On : 27/12/2021

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 505/12/2022-23

Date: 31/12/2022

### AMBIENT NOISE LEVEL MONITORING REPORTS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 20/12/2022

Sample Collected by : Royal Environment

Sr. No.	Location of Sampling	Results in dB(A) (Day Time)	Results in dB(A) (Night Time)
		Day Time 6:00 AM - 10:00 PM	Night Time 10:00 PM - 6:00 AM
	<b>Permissible Limits</b>	<b>75.0</b>	<b>70.0</b>
	<b>Monitoring is carried out during</b>	<b>11:00 - 12:00 AM</b>	<b>01:00 - 02:00 AM</b>
01.	Sec. Main Gate	65.2	58.9
02.	Pipe Storage Yard	66.9	60.3
03.	Nr. Admin Office	62.5	55.4
04.	Nr. Canteen	63.7	59.7
05.	Nr. Utility Area	67.8	60.8

#### CPCB Standards

Area Code	Category of Area / Zone	Limit in dB(A) Leq.	
		Day Time	Night Time
A	Industrial Area	75.0	70.0
B	Commercial Area	65.0	55.0
C	Residential Area	55.0	45.0
D	Silence Zone	50.0	40.0

Instruments used : Sound level meter, Model : SL-4030 (Lutron), Calibration Done on : 04/03/2022

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Ref. No.: 601/01/2022-23

Date: 01/02/2023

### REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 1	Stack No. 2
01	Stack Attached to	---	DN80-400-01, DN80-400-02, DN200-600, DN450-1200 Double station barrel/socket groove/socket bell grinding +socket Zn coating	DI Core Shop
02	Date of Sampling	---	27/01/2023	27/01/2023
03	Time of Sampling	---	09 30	10:00
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter
05	Stack Height	Meter	30	20
06	Stack Temperature	° C	58	47
07	Ambient Temperature	° C	22	22
08	Average Velocity of Flue Gases	M/Sec.	6.9	7.2
09	Isokinetic flow rate for P.M. Sampling	LPM	19	21
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	150	150
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	38	33
13	Permissible Limit for SO <sub>2</sub> *	ppm	100	100
14	Measured Concentration of SO <sub>2</sub>	ppm	1.2	1.7
15	Permissible Limit for NO <sub>x</sub> *	ppm	50	50
16	Measured Concentration of NO <sub>x</sub>	ppm	12.9	10.3

Instruments Used : Ecotech stack monitoring kit ESS - 100,

\* Permissible limits as per GPCB CC&A

Calibration Done On. : 26/12/2022

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## Environment Auditing & Consultancy Service

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Ref. No.: 602/01/2022-23

Date: 01/02/2023

## REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 3	Stack No. 4	Stack No. 5
01	Stack Attached to	---	Mg Powder injection system + Induction furnace (3 nos. with two crucibles each, cap:15 Ton each)	DN80-400, DN200-600 Double Stations Barrel Zinc coating system	DN80-400, DN450-1200 Double Stations Barrel Zinc coating system
02	Date of Sampling	---	27/01/2023	27/01/2023	27/01/2023
03	Time of Sampling	---	10:45	11:30	12:20
04	Air Pollution Control Measures	---	Bag Filter (Common Stack)	Bag Filter	Bag Filter
05	Stack Height	Meter	30	30	30
06	Stack Temperature	° C	35	37	34
07	Ambient Temperature	° C	22	22	22
08	Average Velocity of Flue Gases	M/Sec.	8.2	7.8	7.5
09	Isokinetic flow rate for P.M. Sampling	LPM	18	21	19
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	30	30	30
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	25	23	26

Instruments Used : Ecotech stack monitoring kit ESS - 100,  
Calibration Done On. : 26/12/2022

\* Permissible limits as per GPCB CC&A

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## Environment Auditing & Consultancy Service

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Ref. No.: 604/01/2022-23

Date: 01/02/2023

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Location No. 4	Location No. 5	Location No. 6
01.	Location of Sampling	---	Nr. Finishing Line	Near Canteen	2nd Entry Gate
02.	Date of sampling	---	28/01/2023	28/01/2023	28/01/2023
03.	Time of sampling	Hr.	09:45	10:40	11:30
04.	Dominant Wind Direction (From)	---	SE	SW	SE
05.	Wind Speed	Km./Hr.	3 to 17	3 to 17	3 to 17
06.	Average flow rate during sampling	m3/minute	1.20	1.20	1.10
07.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
08.	Permissible Limits of PM 2.5 *	$\mu\text{g}/\text{m}^3$	60	60	60
09.	Measured Concentration of PM 2.5	$\mu\text{g}/\text{m}^3$	26.2	25.8	27.4
10.	Permissible Limits of PM 10 *	$\mu\text{g}/\text{m}^3$	100	100	100
11.	Measured Concentration of PM 10	$\mu\text{g}/\text{m}^3$	54.9	52.5	53.1
12.	Permissible Limits of SO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
13.	Measured Concentration of SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	16.6	18.1	17.4
14.	Permissible Limits of NO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
15.	Measured Concentration of NO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	22.1	23.4	24.7

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On . : 26/12/2022

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No.: 604/01/2022-23

Date: 01/02/2023

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Location No. 4	Location No. 5	Location No. 6
01.	Location of Sampling	---	Nr. Finishing Line	Near Canteen	2nd Entry Gate
02.	Date of sampling	---	28/01/2023	28/01/2023	28/01/2023
03.	Time of sampling	Hr.	09:45	10:40	11:30
04.	Dominant Wind Direction (From)	---	SE	SW	SE
05.	Wind Speed	Km./Hr.	3 to 17	3 to 17	3 to 17
06.	Average flow rate during sampling	m3/minute	1.20	1.20	1.10
07.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
08.	Permissible Limits of PM 2.5 *	$\mu\text{g}/\text{m}^3$	60	60	60
09.	Measured Concentration of PM 2.5	$\mu\text{g}/\text{m}^3$	26.2	25.8	27.4
10.	Permissible Limits of PM 10 *	$\mu\text{g}/\text{m}^3$	100	100	100
11.	Measured Concentration of PM 10	$\mu\text{g}/\text{m}^3$	54.9	52.5	53.1
12.	Permissible Limits of SO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
13.	Measured Concentration of SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	16.6	18.1	17.4
14.	Permissible Limits of NO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
15.	Measured Concentration of NO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	22.1	23.4	24.7

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On . : 26/12/2022

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 605/01/2022-23

Date: 01/02/2023

### AMBIENT NOISE LEVEL MONITORING REPORTS

**Name of company : Welspun DI Pipes Limited, (ID:80431)**

**Address** : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

**Date of Sampling** : 27/01/2023

**Sample Collected by** : Royal Environment

Sr. No.	Location of Sampling	Results in dB(A)	Results in dB(A)
		(Day Time)	(Night Time)
Time of Sampling		Day Time	Night Time
		6:00 AM - 10:00 PM	10:00 PM - 6:00 AM
Permissible Limits		75.0	70.0
Monitoring is carried out during		01:00 - 02:00 PM	01:10 - 02:00 AM
01.	Sec. Main Gate	63.5	55.4
02.	Pipe Storage Yard	65.4	59.4
03.	Nr. Admin Office	62.1	56.3
04.	Nr. Canteen	63.9	60.6
05.	Nr. Utility Area	66.4	58.7

#### CPCB Standards

Area Code	Category of Area / Zone	Limit in dB(A) Leq.	
		Day Time	Night Time
A	Industrial Area	75.0	70.0
B	Commercial Area	65.0	55.0
C	Residential Area	55.0	45.0
D	Silence Zone	50.0	40.0

Instruments used : Sound level meter, Model : SL-4030 (Lutron), Calibration Done on . 04/03/2022

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Ref. No.: 701/02/2022-23

Date: 01/03/2023

### REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 1	Stack No. 2
01	Stack Attached to	---	DN80-400-01, DN80-400-02, DN200-600, DN450-1200 Double station barrel/socket groove/socket bell grinding +socket Zn coating	DI Core Shop
02	Date of Sampling	---	25/02/2023	25/02/2023
03	Time of Sampling	---	10:10	09:30
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter
05	Stack Height	Meter	30	20
06	Stack Temperature	° C	58	47
07	Ambient Temperature	° C	26	26
08	Average Velocity of Flue Gases	M/Sec	6.8	7.0
09	Isokinetic flow rate for P.M. Sampling	LPM	20	19
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	150	150
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	36	34
13	Permissible Limit for SO <sub>2</sub> *	ppm	100	100
14	Measured Concentration of SO <sub>2</sub>	ppm	1.5	1.8
15	Permissible Limit for NO <sub>x</sub> *	ppm	50	50
16	Measured Concentration of NO <sub>x</sub>	ppm	11.6	12.3

Instruments Used : Ecotech stack monitoring kit ESS - 100,

\* Permissible limits as per GPCB CC&A

Calibration Done On : 26/12/2022

Royal Environment Auditing & Consultancy Service



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## Environment Auditing & Consultancy Service

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Ref. No.: 702/02/2022-23

Date: 01/03/2023

## REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 3	Stack No. 4	Stack No. 5
01	Stack Attached to	---	Mg Powder Injection system + Induction furnace (3 nos. with two crucibles each, cap:15 Ton each)	DN80-400, DN200-500 Double Stations Barrel Zinc coating system	DN80-400, DN450-1200 Double Stations Barrel Zinc coating system
02	Date of Sampling	---	25/02/2023	25/02/2023	25/02/2023
03	Time of Sampling	---	11:00	12:15	11:40
04	Air Pollution Control Measures	---	Bag Filter (Common Stack)	Bag Filter	Bag Filter
05	Stack Height	Meter	30	30	30
06	Stack Temperature	° C	38	36	35
07	Ambient Temperature	° C	26	27	27
08	Average Velocity of Flue Gases	M/Sec.	7.9	7.6	7.8
09	Isokinetic flow rate for P.M. Sampling	LPM	20	19	21
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	30	30	30
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	28	24	25

Instruments Used : Ecotech stack monitoring kit ESS - 100,

Calibration Done On. : 26/12/2022

\* Permissible limits as per GPCB CC&A

Royal Environment Auditing & Consultancy Service



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## Environment Auditing & Consultancy Service

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Ref. No.: 703/02/2022-23

Date: 01/03/2023

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Location No. 1	Location No. 2	Location No. 3
01.	Location of Sampling	---	Nr. Core Shop	Nr. WDI Pipe Yard	Main Entry Gate
02.	Date of sampling	---	25/02/2023	25/02/2023	25/02/2023
03.	Time of sampling	Hr.	09:00	10:00	09:25
04.	Dominant Wind Direction (From)	---	SW	SW	SE
05.	Wind Speed	Km./Hr.	3 to 16	3 to 16	3 to 16
06.	Average flow rate during sampling	m3/minute	1.10	1.20	1.10
07.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
08.	Permissible Limits of PM 2.5 *	$\mu\text{g}/\text{m}^3$	60	60	60
09.	Measured Concentration of PM 2.5	$\mu\text{g}/\text{m}^3$	29.3	31.5	30.2
10.	Permissible Limits of PM 10 *	$\mu\text{g}/\text{m}^3$	100	100	100
11.	Measured Concentration of PM 10	$\mu\text{g}/\text{m}^3$	53.4	54.8	52.7
12.	Permissible Limits of SO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
13.	Measured Concentration of SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	18.4	20.3	19.6
14.	Permissible Limits of NO <sub>2</sub> *	$\mu\text{g}/\text{m}^3$	80	80	80
15.	Measured Concentration of NO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	24.1	26.5	27.4

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On : 26/12/2022

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

Royal Environment Auditing & Consultancy Service



Analyst



# Royal

## Environment Auditing & Consultancy Service

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Ref. No.: 704/02/2022-23

Date: 01/03/2023

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Location No. 4	Location No. 5	Location No. 6
01.	Location of Sampling	---	Nr. Finishing Line	Near Canteen	2nd Entry Gate
02.	Date of sampling	---	26/02/2023	26/02/2023	26/02/2023
03.	Time of sampling	Hr.	09:30	10:15	11:00
04.	Dominant Wind Direction (From)	---	SE	SW	SE
05.	Wind Speed	Km./Hr.	1 to 14	1 to 14	1 to 14
06.	Average flow rate during sampling	m <sup>3</sup> /minute	1.10	1.10	1.20
07.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
08.	Permissible Limits of PM 2.5 *	µg/m <sup>3</sup>	60	60	60
09.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	27.8	28.2	26.5
10.	Permissible Limits of PM 10 *	µg/m <sup>3</sup>	100	100	100
11.	Measured Concentration of PM 10	µg/m <sup>3</sup>	53.7	54.8	52.7
12.	Permissible Limits of SO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80
13.	Measured Concentration of SO <sub>2</sub>	µg/m <sup>3</sup>	18.6	17.2	16.5
14.	Permissible Limits of NO <sub>2</sub> *	µg/m <sup>3</sup>	80	80	80
15.	Measured Concentration of NO <sub>2</sub>	µg/m <sup>3</sup>	25.6	24.2	23.1

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On : 26/12/2022

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 705/02/2022-23

Date: 01/03/2023

### AMBIENT NOISE LEVEL MONITORING REPORTS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 25/02/2023

Sample Collected by : Royal Environment

Sr. No.	Location of Sampling	Results in dB(A) (Day Time)	Results in dB(A) (Night Time)
		Day Time 6:00 AM - 10:00 PM	Night Time 10:00 PM - 6:00 AM
	<b>Time of Sampling</b>		
	<b>Permissible Limits</b>	75.0	70.0
	<b>Monitoring is carried out during</b>	01:00 - 02:00 PM	01:30 - 02:30 AM
01.	Sec. Main Gate	64.2	54.2
02.	Pipe Storage Yard	66.3	58.1
03.	Nr. Admin Office	63.5	57.4
04.	Nr. Canteen	62.7	59.3
05.	Nr. Utility Area	65.5	59.7

#### CPCB Standards

Area Code	Category of Area / Zone	Limit in dB(A) Leq.	
		Day Time	Night Time
A	Industrial Area	75.0	70.0
B	Commercial Area	65.0	55.0
C	Residential Area	55.0	45.0
D	Silence Zone	50.0	40.0

Instruments used : Sound level meter, Model : SL-4030 (Lutron), Calibration Done on : 04/03/2022

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Ref. No. : 706/02/2022-23

Date: 01/03/2023

## WORK ZONE NOISE LEVEL MEASUREMENT

**Name of company : Welspun DI Pipes Limited, (ID:80431)**

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 25/02/2023

Readings Taken by : Royal Environment

Sr.No.	Location of Sampling	Results in dB(A)
<b>Permissible Limits for 8:00 Hrs.</b>		<b>90.0</b>
<b>Monitoring is carried out during</b>		<b>02:00 to 3:00 PM</b>
01	Zn Coating Area	82.2
02	Core Shop area	79.6
03	CCM area	80.4
04	CML area	79.6
05	Anneling Furnace area	82.1
06	Induction Furnace area	80.9
07	Bitumin Coating area	76.3

Instruments used : Lutron Make Sound level meter, Model No. SL-4030

Calibration done on: 04/03/2022

Royal Environment Auditing & Consultancy Service



(A)

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## Environment Auditing & Consultancy Service

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Ref. No. : 707/02/2022-23

Date: 01/03/2023

### ANALYSIS RESULT OF FUGITIVE EMISSION

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 25/02/2023

Sample Collected by : Royal Environment

Sr. No.	Area/Plant	Monitoring Location	SPM Level ( $\mu\text{g}/\text{Nm}^3$ )
<b>Permissible Limit**</b>			<b>3000</b>
<b>Monitoring is carried out during</b>			<b>03:00 to 04:00 PM</b>
01	DI Pipe Plant	Coreshop Area	1490
02		CCM Area	1675
03		CML Area	1510

Instruments Used : HVS APM 430, Calibration done on.: 28/12/2021

\*\* Permissible Limits are as per GPCB CC&A.

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Ref. No. : 708/02/2022-23

Date: 01/03/2023

### ILLUMINATION LEVEL MEASUREMENT

**Name of company : Welspun DI Pipes Limited, (ID:80431)**

**Address** : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 26/02/2023

Readings Collected by : Royal Environment

Sr. No.	Location of Sampling	Illumination Lux (As per standards IS - 3646 Part - II : 1966)	Monitoring is carried out during	
			Illumination Day Time	Illumination Night Time
			10:30 to 11:30 AM	11:30 to 12:30 PM
01	Zn Coating Area	300	330	315
02	Core Shop area	300	350	340
03	CCM area	300	400	350
04	CML area	300	350	325
05	Anneling Furnace area	300	360	345
06	Induction Furnace area	300	365	340
07	Bitumin Coating area	300	390	345

Instruments used : Lutron Make Lux Meter, Model No. LX-101A

Calibration done on: 02/09/2021

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Ref. No. : 710/02/2022-23

Date: 01/03/2023

### WATER SAMPLE ANALYSIS REPORT

**Name of company : Welspun DI Pipes Limited, (ID:80431)**

**Address** : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 25/02/2023

Source of Sample : **Canteen**

Sample Collected by : Royal Environment

Sr. No.	Parameters	Unit	Acceptable Limit	Permissible Limits(*)	Result
01.	Color	Pt.Co.Scale	5	15	Colorless
02.	Odour	--	Agreeable	Agreeable	Odorless
03.	Temperature	°C	---	---	28
04.	Turbidity	NTU	1	5	NIL
05.	pH	pH Unit	6.5 to 8.5	No Relaxation	7.32
06.	T.D.S.	Mg/L	500	2000	158
07.	Total Hardness	Mg/L	200	600	40
08.	Ca as Ca	Mg/L	75	200	7.5
09.	Mg as Mg	Mg/L	30	100	5.2
10.	Copper	Mg/L	0.05	1.5	< 0.01
11.	Iron	Mg/L	0.3	No Relaxation	< 0.01
12.	Lead	Mg/L	0.01	No Relaxation	< 0.01
13.	Manganese	Mg/L	0.1	0.3	< 0.01
14.	Chloride	Mg/L	250	1000	33.2
15.	Sulphate	Mg/L	200	400	6.8
16.	Nitrate	Mg/L	45	No Relaxation	2.9
17.	Fluoride	Mg/L	1.0	1.5	0.05
18.	Phenolic Compound	Mg/L	0.001	0.002	NIL
19.	Free Residual Chlorine	Mg/L	0.2	1	< 0.01
20.	Total Alkalinity as Calcium Carbonate	Mg/L	200	600	28.0
21.	E - Coli	Coli	---	---	Absent

(\*) Permissible Limit in the Absense of Alternate Source as per IS 10500 : 2012, Drinking Water Specification

Note: The water is safe to drink with respect of parameters checked above as per IS 10500:2012 standard

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Analyst

Ref. No. : 709/02/2022-23

Date: 01/03/2023


## Form No. 37 WORK PLACE MONITORING REPORT

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e).

- 1 Name of the Department/Plant. : Zn Coating, Coeshop, Annealing furnace area of M/s. Welspun DI Pipes Ltd., Anjar, Kutch.
- 2 Raw materials, by products and finished products involved in the process. TOTAL DUST
- 3 Particulars of sampling

Date of Sampling : 26th February 2023

Sample Collected by : Royal Environment

Sr. No	Location Operation monitored	Identified Contaminate	Time of Sampling	Sampling Instrument used	Airborne Contamination			TWA** concentration (As given in Second Schedule) Mg/m <sup>3</sup>	Refrance Method	Number of Workers exposed at the location being monitored	Remarks	Signature person taking samples	Name (in block letters)
					Number of sample	Range	Average						
1	Zn Coating area	Total Dust	09:00 to 10:00 AM	Personal Respirable Dust sampler VPDS 203	2	1.3-1.9	1.60	10	Gravimetric	4	---		Mr. PATAT ASHISH
2	CCM area	Total Dust			2	2.4-3.1	2.75	10		5	---		
3	CML area	Total Dust			2	1.9-2.5	2.20	10		2	---		
4	Annealing Furnace area	Total Dust			2	1.3-2.2	1.75	10		3	---		

\*\* Permissible limits (TWA) are as per ACGIH Standards.  
Calibration Done On. : 04/03/2022

For, Royal Environment Auditing & Consultancy Service



Royal Environment Auditing & Consultancy Service

Authorized Sign



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Ref. No.: 801/03/2022-23

Date: 30/03/2023

### REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Permissible Limit	Stack No. 1	Stack No. 2
01	Stack Attached to	---	---	DN80-400-01, DN80-400-02, DN200-600, DN450-1200 Double station barrel/socket groove/socket bell grinding + socket Zn coating	DI Core Shop
02	Date of Sampling	---	---	20/03/2023	20/03/2023
03	Time of Sampling	---	---	09:15	10:00
04	Air Pollution Control Measures	---	---	Bag Filter	Bag Filter
05	Stack Height	Meter	---	30	20
06	Stack Temperature	° C	---	54	49
07	Ambient Temperature	° C	---	27	27
08	Average Velocity of Flue Gases	M/Sec.	---	7.1	6.9
09	Isokinetic flow rate for P.M. Sampling	LPM	---	21	20
10	P.M.	mg/Nm <sup>3</sup>	30	18	20
11	SO <sub>2</sub>	ppm	100	1.7	2.1
12	NO <sub>x</sub>	ppm	50	12.5	13.6

Instruments Used : Ecotech stack monitoring kit ESS - 100.

\* Permissible limits as per GPCB CC&A

Calibration Done On : 26/12/2022

Royal Environment Auditing & Consultancy Service



Ashish  
Analyst



# Royal

## Environment Auditing & Consultancy Service

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Ref. No.: 802/03/2022-23

Date: 30/03/2023

# REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Permissible Limit	Stack No. 3	Stack No. 4	Stack No. 5
01	Stack Attached to	---	--	Mg Powder injection system + Induction furnace (3 nos. with two crucibles each, cap:15 Ton each)	DN80-400, DN200-600 Double Stations Barrel Zinc coating system	DN80-400, DN450-1200 Double Stations Barrel Zinc coating system
02	Date of Sampling	---	--	20/03/2023	20/03/2023	20/03/2023
03	Time of Sampling	---	--	12:15	10:45	11:30
04	Air Pollution Control Measures	---	--	Bag Filter (Common Stack)	Bag Filter	Bag Filter
05	Stack Height	Meter	--	30	30	30
06	Stack Temperature	° C	--	41	38	37
07	Ambient Temperature	° C	--	27	27	27
08	Average Velocity of Flue Gases	M/Sec.	--	7.5	7.7	7.2
09	Isokinetic flow rate for P.M. Sampling	LPM	--	19	18	20
10	P.M.	mg/Nm <sup>3</sup>	30	24	26	28

Instruments Used : Ecotech stack monitoring kit ESS - 100.

\* Permissible limits as per GPCB CC&A

Calibration Done On : 26/12/2022

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Ref. No.: 803/03/2022-23

Date: 30/03/2023

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Permissible Limits	Location No. 1	Location No. 2	Location No. 3
01.	Location of Sampling	----	--	Nr. Core Shop	Nr. WDI Pipe Yard	Main Entry Gate
02.	Date of sampling	----	--	20/03/2023	20/03/2023	20/03/2023
03.	Time of sampling	Hr.	--	09:25	09:00	10:10
04.	Dominant Wind Direction (From)	----	--	SW	SW	SE
05.	Wind Speed	Km./Hr.	--	2 to 18	2 to 18	2 to 18
06.	Average flow rate during sampling	m3/minute	--	1.20	1.20	1.10
07.	Average flow rate for Gas sampling	LPM	--	0.2	0.2	0.2
08.	PM 2.5	$\mu\text{g}/\text{m}^3$	60	32.5	30.8	29.6
09.	PM 10	$\mu\text{g}/\text{m}^3$	100	55.8	56.3	54.7
10.	Measured Concentration of SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	80	20.5	21.4	23.5
11.	Measured Concentration of NO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	80	28.7	29.6	26.8

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On : 26/12/2022

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No.: 804/03/2022-23

Date: 30/03/2023

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Permissible Limits	Location No. 4	Location No. 5	Location No. 6
01.	Location of Sampling	----	--	Nr. Finishing Line	Near Canteen	2nd Entry Gate
02.	Date of sampling	----	--	21/03/2023	21/03/2023	21/03/2023
03.	Time of sampling	Hr.	--	10:00	10:20	09:40
04.	Dominant Wind Direction (From)	----	--	SE	SW	SE
05.	Wind Speed	Km./Hr.	--	2 to 15	2 to 15	2 to 15
06.	Average flow rate during sampling	m3/minute	--	1.10	1.20	1.20
07.	Average flow rate for Gas sampling	LPM	--	0.2	0.2	0.2
09.	PM 2.5	$\mu\text{g}/\text{m}^3$	60	28.9	30.6	29.4
11.	PM 10	$\mu\text{g}/\text{m}^3$	100	51.4	53.6	55.4
13.	Measured Concentration of SO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	80	20.3	18.9	19.4
15.	Measured Concentration of NO <sub>2</sub>	$\mu\text{g}/\text{m}^3$	80	27.4	25.6	26.2

Instrument used : Ecotech RDS (APM - 217 BL), Gaseous Sampling Kit AAS109 & PM 2.5 Sampler

Calibration Done On : 26/12/2022

\*Permissible Limits are as per NAAQ Standard 16th November 2009.

Royal Environment Auditing & Consultancy Service

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Ref. No. : 805/03/2022-23

Date: 30/03/2023

### AMBIENT NOISE LEVEL MONITORING REPORTS

Name of company : Welspun DI Pipes Limited, (ID:80431)

Address : Survey No. 617, 618, 632, 633, Vill.: Varsamedi,  
Welspun City, Taluka: Anjar, Dist. Kutch - 370 110.

Date of Sampling : 20/03/2023

Sample Collected by : Royal Environment

Sr. No.	Location of Sampling	Permissible Limits dB(A) Day Time	Results in dB(A) (Day Time)	Permissible Limits dB(A) Night Time	Results in dB(A) (Night Time)
			6:00 AM - 10:00 PM		10:00 PM - 6:00 AM
Monitoring is carried out during			01:00 - 02:00 PM		01:30 - 02:30 AM
01.	Sec. Main Gate	75	65.8	70	53.4
02.	Pipe Storage Yard	75	64.1	70	57.1
03.	Nr. Admin Office	75	62.2	70	56.6
04.	Nr. Canteen	75	61.7	70	55.4
05.	Nr. Utility Area	75	66.9	70	58.1

#### CPCB Standards

Area Code	Category of Area / Zone	Limit in dB(A) Leq.	
		Day Time	Night Time
A	Industrial Area	75.0	70.0
B	Commercial Area	65.0	55.0
C	Residential Area	55.0	45.0
D	Silence Zone	50.0	40.0

Instruments used : Sound level meter, Model : SL-4030 (Lutron), Calibration Done on : 04/03/2023

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