

Date: 30/11/2022

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 Metallics Ltd.

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

Dear Sir,

With reference to above, we are submitting herewith the Half Yearly Compliance report of Welspun Metallics Ltd., Anjar, Kutch, Gujarat for the period of April 2022 to September 2022.

Thanking You.

Yours faithfully,

For Welspun Metallics Ltd.,



M. Tamilmani  
Sr. Vice President-Operations

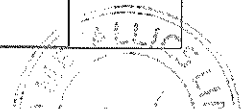
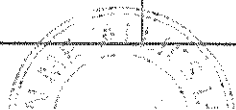
CC:

- 1) Gujarat Pollution Control Board, Gandhinagar
- 2) Regional Office, Central Pollution Control Board, Vadodara

**EC Compliance Report for**  
**M/s. Welspun Metallics Limited (WML) located at Village: Versamedi,**  
**Tehsil: Anjar, District: Kutch, Gujrat.**  
**EC F No. J-11011/136/2015-IA-II(I) dated 22<sup>nd</sup> March 2021.**

Sr. No.	Conditions							Compliance	
	Specific Condition								
1	Sr. No.	Name of facility	Exiting Units		Proposed units		Total Units (Existing +Proposed)		
			configuration	Product ion MTPA	configuration	Product ion MTPA	configuration	Product ion 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 LF- 1 x 165 T	(-)1.55	BOF- 1x 165 T	1.55	
			LF- 2 x 165 T				LF- 1 x 165 T		
			VD- 1x 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	-	-	1 Unit	0.1 MTPA	1 Unit	0.1 MTPA

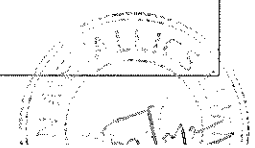
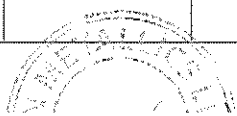


	Moulding Facility							
2	The proposal for part transfer of 0.5 MTPA DI pipe unit in the name of M/s. Welspun DI Pipes Limited Was considered during 28 <sup>th</sup> meeting of the Re -constituted Expert Appraisal Committee (Industry -I) held on 18-19 <sup>th</sup> January , 2021 wherein the committee formed sub-committee. The Sub- committee their report after examination of the following;							Noted
I	“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							

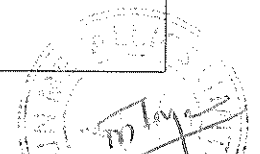


Sr No	Item	Total Capacity as per EC recommended upper para 7 (ii)	Facilities/ Utilities after amendment in EC and subsequent partial transfer of DI Pipe Plant from EC of Parent Company (WML) to New Company (WDI)	Compliance status
			Parent Company (WML)	
A	<b>Title of the Project</b>	Installation of 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	Installation of 3.0 MTPA Integrated Steel Plant including 1.5 MTPA Cement Plant and 200MW CPP by by M/s Welspun Metallics Ltd., located at Village Versamedi, Tehsil Anjar, District Kutch, Gujarat	
B	<b>Location</b>	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° 6'23"N to 23° 7'53"N Longitude- 70° 4'3"E to 70° 5'56"E	Noted
C	<b>Units/Facilities</b>			
1.	Coke Ovens & By-products Recovery Plant (COBP)	2 X 58 No. Ovens -1.37 MTPA Gross Coke	2 X 58 No. Ovens -1.37 MTPA Gross Coke	Point noted and will be complied.
2.	Sinter Plant	1 x 496 sq m -5.28 MTPA	1 x 496 sq m -5.28 MTPA	Welspun Metallics Ltd (WML) has installed the Sinter Plant of capacity 0.72MTPA
3.	Blast Furnace	1 x 4300 m3- 3.34 MTPA Hot Metal	1 x 4300 m3- 3.34 MTPA Hot Metal	Welspun Metallics Ltd (WML) has installed the Blast Furnace of capacity 0.5 MTPA.
4.	Steel Melt Shop	BOF - 2 x 165 T LF - 2 x 165 T VD - 1 x 165 T 1.55 MTPA	BOF - 1 x 165 T LF - 1 x 165 T VD - 1 x 165 T 1.55 MTPA	Point noted and will be complied.
5.	Continuous Casting	Slab caster --1 x 1 Strand 1.6 MTPA	Slab caster - 1 x 1 Strand 1.6.MTPA	Point noted and will be complied.
6.	DI Pipe Plant (Including Induction Furnaces, Convertor,	2 X 0.25 MTPA-0.5 MTPA	-	DI Pipe Plant (Including Induction Furnaces, Convertor, Centrifugal Casting Machine, Annealing

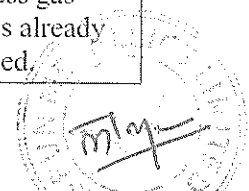
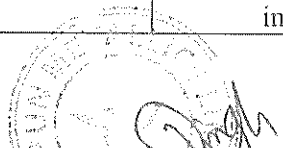
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			Parent Company (WML)	
	Centrifugal Casting Machine, Annealing Furnace, Finishing Line.)			Furnace, and Finishing Line.) has already been commissioned & started production.
7.	Foundry Shop for Metal Fitting and other casting using Heating and Melting Furnace (Induction Furnace) and Sand Moulding Facility	0.1 MTPA	0.1 MTPA	Point noted and will be complied.
8.	Lime/dolo Calcining Plant 1 x 600 TPD	2 x 600 TPD 0.17 MTPA	1 x 600 TPD 0.17 MTPA	Point noted and will be complied.
9.	Power Plant	2 X 100 MW (Gas based) 165 MW BF-TRT, CDQ & Sinter Cooler 35 MW	2 X 100 MW (Gas based) 165 MW BF-TRT, CDQ & Sinter Cooler 35 MW	Point noted and will be complied.
10.	Cement Grinding unit	1.5 MTPA	1.5 MTPA	Point noted and will be complied.
D	<b>Process Description</b>	<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 metal production capacity of 3.34 MTPA followed by 1.6 MTPA slab casting</li> </ul>	<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 metal production capacity of 3.34 MTPA followed by 1.6 MTPA slab casting</li> </ul>	Point noted and will be 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)	Compliance status
			Parent Company (WML)	
		<ul style="list-style-type: none"> <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; <ul style="list-style-type: none"> <li>Cement lining, zinc and bitumen coatings &amp; stampings</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Power generation through waste heat recovery.</li> <li>Cement Grinding unit based on BF Slag</li> </ul>	
E	Land Requirement	231.58 ha (77.2 ha -33.3% Greenbelt )	207.08 ha (68.33 ha -33.3% Greenbelt )	Point noted and will be complied
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> </ul>	<ul style="list-style-type: none"> <li>Iron Ore (Fines) – 4.08 MTPA</li> <li>Iron ore (Lump) – 1.88 MTPA</li> <li>Coking Coal – 2.01 MTPA</li> <li>Non Coking Coal – 0.09 MTPA</li> </ul>	Point noted and will be complied

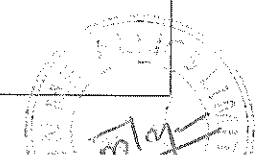
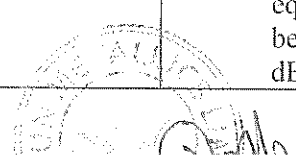


Sr No	Item	Total Capacity as per EC recommended upper para 7 (ii)	Facilities/ Utilities after amendment in EC and subsequent partial transfer of DI Pipe Plant from EC of Parent Company (WML) to New Company (WDI)	Compliance status
			Parent Company (WML)	
		<ul style="list-style-type: none"> <li>• PCI 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>• Calcined Lime-600 TPA</li> </ul>	<ul style="list-style-type: none"> <li>• PCI Coal – 0.64 MTPA</li> <li>• Limestone – 0.92 MTPA</li> <li>• Dolomite – 0.41 MTPA</li> <li>• Calcined lime-600 TPAS</li> </ul>	
G	Water Requirement	47232 m <sup>3</sup> /day (1755 m <sup>3</sup> /hr)	37224 m <sup>3</sup> /day	Point noted and will be complied
H	Power Requirement	211 MW	195 MW	Point noted and will be complied
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>• 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) – 14155 Nm<sup>3</sup>/hr</li> <li>• Propane – 20 TPD</li> </ul>	Point noted and will be complied
J	Pollutants	PM –273.1Kg/hr SO2 –551.8 Kg/hr NOx –869.3 Kg/hr	PM – 258.9 Kg/hr SO2 – 547 Kg/hr NOx – 862 Kg/hr	Point noted and will be complied
K	Pollution Mitigation Measures			
1	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> </ul>	<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> </ul>	WML has installed the Dry Fogging system in material handling. Electrostatic Precipitator (ESP) based process gas cleaning has already been installed.





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			Parent Company (WML)	
		<ul style="list-style-type: none"> <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 NOx oxy-fuel burners in Annealing furnaces</li> </ul>	<ul style="list-style-type: none"> <li>low NOx stage combustion burners</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> </ul>	
2	<b>Noise Pollution Control</b>	<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>	<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 are being complied

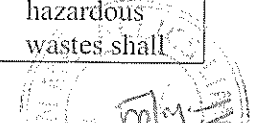
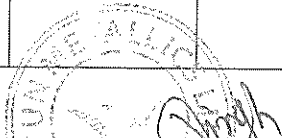


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			Parent Company (WML)	
		<ul style="list-style-type: none"> <li>• The fans and ductwork will be designed for minimum vibration.</li> <li>• All the equipment in different units will be designed/operated in such a way that the noise level shall not 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</li> <li>• marked as "High Noise Zone".</li> <li>• In shops where measures are not feasible, attempts shall be made to</li> <li>• 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</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</li> <li>• 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</li> </ul>	



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			Parent Company (WML)	
		<p>to use them regularly, while at work.</p> <ul style="list-style-type: none"> <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>	<p>regularly, while at work.</p> <ul style="list-style-type: none"> <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>	
3	Effluents Generation And Management	<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> <li>Cooling tower blow downs and treated effluent from BOD plant of coke ovens would be taken to the CETP for further treatment</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> <li>Cooling tower blow downs and treated effluent from BOD plant of coke ovens would be taken to the CETP for</li> </ul>	<p>WML is a Zero Liquid Discharge plant. WML will treat the wastewater in our Common CETP of WIL. Hazardous waste generated will be collected and disposed at GPCB authorized TSDF.</p>

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			Parent Company (WML)	
		<ul style="list-style-type: none"> <li>and reuse as make-up 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 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>further treatment and reuse as make-up 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 level.</li> </ul>	
4	<b>Solid and Hazardous Wastes</b>	<ul style="list-style-type: none"> <li>All non-hazardous solid wastes shall be utilized in-house in Sinter Plant/BOF.</li> <li>BF/BOF Slag shall be utilized in house or sold to cement manufacturers or used for road construction.</li> <li>Coal tar sludge and BOD sludge would be recycled for coke making by mixing with the coal charge.</li> </ul>	<ul style="list-style-type: none"> <li>All non-hazardous solid wastes shall be utilized in-house in Sinter Plant/BOF.</li> <li>BF/BOF Slag shall be utilized in house or sold to cement manufacturers or used for road construction.</li> <li>Coal tar sludge and BOD sludge would be recycled for coke making by mixing with the coal charge.</li> </ul>	<ul style="list-style-type: none"> <li>All non-hazardous solid wastes are being utilized in-house in Sinter Plant.</li> <li>BF Slag are being utilized in house for road construction and being sold to cement manufacturer s.</li> <li>All other hazardous wastes shall</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) Parent Company (WML)	Compliance status
		<ul style="list-style-type: none"> <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>• All other hazardous wastes shall be disposed in secured landfill/ handed over to authorized dealers for disposal as per statutory norms</li> <li>• disposal as per statutory norms</li> </ul>	<p>be disposed in secured landfill/ handed over to authorized dealers for disposal as per statutory norms</p>



Sr. No.	Conditions	Compliance
<b>Specific Condition</b>		
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 and the signal is being received in plant control room for central control of APCDs installed in the plant and will be connected & transmitted the details at CPCB/GPCB website online.
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 being complied
6	100 % use / recycle of solid waste generated in DI plant shall be ensured.	Not applicable.
7	Tree density in Green belt shall be 2500 trees per ha. WDI Plant shall have 36.6 % green belt as committed by PP	Point noted and will be complied.
8	Both plants shall have their independent green belts	Point noted and will be complied
9	Validity of split ECs shall be from Feb 2017.	Point noted and will be complied.
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	More efficient bags such as PTFE bags are being used in the filter bag house and designed for 150% of normal design air flow
11	PP shall use ultralow NO <sub>x</sub> burner with three stage combustion, flue gas recirculation and auto combustion control system.	Point noted and complied.
<b>General condition</b>		
I	<b>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.	Point noted and will be complied
II	<b>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	Welspun Metallics Ltd. has installed 24*7 Continuous Emission Monitoring System at process stacks to monitor stack emission as well as Continuous Ambient Air Quality Station

Sr. No.	Conditions	Compliance
	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.	(CAAQS) for monitoring AAQ parameters. The CEMS & CAAQMS shall be connected to GPCB & CPCB online servers
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.	Point noted and will be complied
4	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	Point noted and will be 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	M/s Welspun Metallics Ltd (WML) has installed ESP as well Bag Filters for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emissions standards.
6	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Point noted and will be complied
7	Secondary emission control system shall be provided at SMS Converters.	Point noted and will be complied
8	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.	Point noted and will be complied
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.	M/s Welspun Metallics Ltd (WML) is recycling & reusing 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 Sinter Plant.
10	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin	M/s Welspun Metallics Ltd (WML) is using leak proof trucks/dumpers carrying coal & other raw materials and cover them with tarpaulin.
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).	Point noted and will be complied
12	Land-based APC system shall be installed to control coke pushing emissions.	Point noted and will be complied
13	Monitor CO, HC and O2 in flue gases of the coke oven battery to detect combustion efficiency and cross	Point noted and will be complied

Sr. No.	Conditions	Compliance
	leakages in the combustion chamber.	
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.	Point noted and will be complied
15	In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NO <sub>x</sub> control facility shall be provided to meet the prescribed standards.	Point noted and will be complied
16	The coke oven gas shall be subjected to desulphurization if the Sulphur content in the coal exceeds 1%.	Point noted and will be complied
17	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Point noted and will be complied
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	M/s Welspun Metallics Ltd has installed dry Gas Cleaning Plant for Blast Furnace.
20	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke.	Point noted and will be complied
<b>III</b>	<b>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.	WML is a Zero Liquid Discharge 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.	Point noted and will be complied.
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;	Point noted and will be complied
4	Adhere to 'Zero Liquid Discharge'	Point noted and will be complied
5	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Point noted and will be complied
6	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy	Point noted and will be complied



Sr. No.	Conditions	Compliance
	rains and to check the water pollution due to surface run off.	
7	Tyre washing facilities shall be provided at the entrance of the plant gates.	Point noted and will be complied
8	CO2 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.	Point noted and will be complied
9	The project proponent shall practice rainwater harvesting to maximum possible extent.	Point noted and will be complied
10	Treated water from ETP of COBP shall not be used for coke quenching.	Point noted and will be complied
11	Water meters shall be provided at the inlet to all unit processes in the steel plants.	The water meter has been installed to all unit process in the 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.	Point noted and will be complied
<b>IV.</b>	<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.	Point noted and will be complied.
<b>V.</b>	<b>Energy Conservation measures</b>	
1	The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.	Point noted and will be complied
2	Coke Dry Quenching (CDQ) shall be provided for coke quenching for the coke oven plant.	Point noted and will be complied
3	Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.	Point noted and will be complied
4	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.	Point noted and will be complied
5	Use hot charging of slabs and billets/blooms as far as possible.	Point noted and will be complied
6	Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.	Point noted and will be complied
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.	Point noted and will be complied
8	Restrict Gas flaring to < 1%.	Point noted and will be complied
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.	Point noted and will be complied
<b>VI.</b>	<b>Waste management</b>	
1	Ar. attrition grinding unit to improve the bulk density of BF	Point noted and will be complied

Sr. No.	Conditions	Compliance
	granulated slag from 1.0 to 1.5 Kg/1 shall be installed to use slag as river sand in construction industry.	
2	Tar Sludge and waste oil shall be blended with coal charged in coke ovens	Point noted and will be complied
3	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	Point noted and will be complied.
4	Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.	Point noted and will be complied
5	Used refractories shall be recycled as far as possible.	Used refractories are being recycled in the company.
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.	Point noted and will be complied
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.	Point noted and will be complied
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.	Point noted and will be complied
9	Kitchen waste shall be composted or converted to biogas for further use.	Point noted and will be complied.
<b>VII.</b>	<b>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.</b>	<b>Public hearing and Human health issues</b>	
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.	Point noted and will be complied
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.</b>	<b>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 approve by the Board of Directors. The	The company have a well laid Occupational Health, Safety&

Sr. No.	Conditions	Compliance
	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.	Environment Policy. Point noted and will be complied
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.	Point noted and will be complied.
X.	<b>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 have 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.	M/s WML 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; PK°, 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.	Point noted and will be complied
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.	M/s WML is submitting the 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 on regular basis.
6	The project proponent shall submit the environmental	M/s WML will submit the

Sr. No.	Conditions	Compliance
	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.	environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V to the Gujarat State Pollution Control Board.
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 Metallics Ltd. (WML) has commissioned of its state-of-the-art Blast Furnace and Sinter plant on 21/07/2022.
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	Point noted and will be complied
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).	Point noted and will be complied
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.	Point noted and will be complied
11	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Point noted and will be complied
12	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Point noted and will be complied
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.	Point noted and will be complied
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.	Point noted and will be complied





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Ref. No.: 2001/08/2022-23

Date: 31/08/2022

### REPORT OF STACK EMISSION ANALYSIS

**Name of company : Welspun Mettalics Limited,(ID-59424)**

**Address :** Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.  
Village: Varsamedi, Welspun City, Tal.: Anjar.  
Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 1
01	Stack Attached to	---	Blast Furnace (Stove Stack)
02	Date of Sampling	---	10/08/2022
03	Time of Sampling	---	10:15
04	Air Pollution Control Measures	---	--
05	Stack Height	Meter	60
06	Stack Temperature	° C	124
07	Ambient Temperature	° C	33
08	Average Velocity of Flue Gases	M/Sec.	7.1
09	Isokinetic flow rate for P.M. Sampling	LPM	20
10	Gaseous Sampling Flow Rate	LPM	2.0
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	30
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	26
13	Permissible Limit for SO <sub>2</sub> *	mg/Nm <sup>3</sup>	200
14	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	11.2
15	Permissible Limit for NO <sub>x</sub> *	mg/Nm <sup>3</sup>	150
16	Measured Concentration of NO <sub>x</sub>	mg/Nm <sup>3</sup>	32.5

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.: 2002/08/2022-23

Date: 31/08/2022

### REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.  
Village: Varsamedi, Welspun City, Tal.: Anjar.  
Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 2	Stack No. 3
01	Stack Attached to	---	Common Stack (Sinter & BF) Plant	Sinter (De-dusting system)
02	Date of Sampling	---	11/08/2022	11/08/2022
03	Time of Sampling	---	9:40	10:30
04	Air Pollution Control Measures	---	Common ESP	Bag Filter
05	Stack Height	Meter	70	50
06	Stack Temperature	° C	126	123
07	Ambient Temperature	° C	29	28
08	Average Velocity of Flue Gases	M/Sec.	7	7.2
09	Isokinetic flow rate for P.M. Sampling	LPM	19	20
10	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	30	30
11	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	22	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.: 2003/08/2022-23

Date: 31/08/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.

Village: Varsamedi, Welspun City, Tal.: Anjar.

Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	AAQMS No. 1	AAQMS No. 2	AAQMS No. 3
01.	Location of Sampling	---	Nr. BF Area	Nr. Sinter Plant	Nr. Coke Oven Unit
02.	Date of sampling	---	10/08/2022	10/08/2022	10/08/2022
03.	Time of sampling	Hr.	10:30	9:25	11:15
04.	Dominant Wind Direction (From)	---	NW	NW	NW
05.	Wind Speed	Km./Hr.	2 to 10	2 to 10	2 to 10
06.	Average flow rate during sampling	m <sup>3</sup> /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 *	µg/m <sup>3</sup>	80	80	80
09.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	42.5	40.4	48.5
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>	77.5	70.2	88.3
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	15.2	14.4
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>	22.5	25.3	26.3

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.: 2004/08/2022-23

Date: 31/08/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.

Village: Varsamedi, Welspun City, Tal.: Anjar.

Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	AAQMS No. 4	AAQMS No. 5	AAQMS No. 6
01.	Location of Sampling	---	Nr. Oxygen Plant	Nr. Admin Office	Nr. Stock House
02.	Date of sampling	---	11/08/2022	11/08/2022	11/08/2022
03.	Time of sampling	Hr.	11:15	9:40	10:25
04.	Dominant Wind Direction (From)	---	NW	NW	NW
05.	Wind Speed	Km./Hr.	3 to 16	3 to 16	3 to 16
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>	35.5	32.2	45.5
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>	68.5	64.4	79.5
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>	13.3	13.8	14.8
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>	23.5	22.4	26.7

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.: 2005/08/2022-23

Date: 31/08/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.

Village: Varsamedi, Welspun City, Tal.: Anjar.

Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	AAQMS No. 7	AAQMS No. 8	AAQMS No. 9
01.	Location of Sampling	---	Nr. Coal/ Coke Yard	Nr. Canteen (Bramhasthan)	Nr. Health Center
02.	Date of sampling	---	12/08/2022	12/08/2022	12/08/2022
03.	Time of sampling	Hr.	9:45	9:00	10:40
04.	Dominant Wind Direction (From)	---	NW	NW	NW
05.	Wind Speed	Km./Hr.	2 to 12	2 to 12	2 to 12
06.	Average flow rate during sampling	m <sup>3</sup> /minute	1.20	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>	44.5	31.2	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>	88.3	65.5	61.2
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	13.3	12.5
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>	26.7	21.5	20.2

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. : 2006/08/2022-23

Date: 31/08/2022

### AMBIENT NOISE LEVEL MONITORING REPORTS

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.  
Village: Varsamedi, Welspun City, Tal.: Anjar.  
Dist.: Kutch - 370 110.

Date of Sampling : 10/08/2022

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
Permissible Limits		75.0	70.0
Monitoring is carried out during		02:30 - 03:30 PM	01:00 - 02:00 AM
01.	Nr. BF Area	71.5	68.3
02.	Nr. Sinter Plant	72.5	67.2
03.	Nr. Coke Oven Unit	70.5	66.5
04.	Nr. Oxygen Plant	68.5	62.4
05.	Nr. Admin Office	63.4	60.2

#### 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. : 2007/10/2022-23

Date: 31/08/2022

### WORK ZONE NOISE LEVEL MEASUREMENT

**Name of company : Welspun Mettalics Limited,(ID-59424)**

**Address** : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.  
Village: Varsamedi, Welspun City, Tal.: Anjar.  
Dist.: Kutch - 370 110.

Date of Sampling : 10/08/2022

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>
<b>BF Plant</b>		
01	Cast House	85.3
02	PCM	78.5
03	Stock House	82.6
04	GCP	75.3
05	Stoves	79.4
06	Blower	80.3
07	PCI	76.1
<b>Sinter Plant</b>		
08	Proportionate Building	75.6
09	Waste Gas Fan	80.8
10	Sinter Machine	78.2
11	Screen House	72.4
12	Crushing House	81.3

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

Calibration done on: 04/03/2022

Royal Environment Auditing & Consultancy Service



Ashish  
Analyst



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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. : 2008/08/2022-23

Date: 31/08/2022

### ANALYSIS RESULT OF FUGITIVE EMISSION

**Name of company : Welspun Mettalics Limited,(ID-59424)**

**Address** : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.  
Village: Varsamedi, Welspun City, Tal.: Anjar.  
Dist.: Kutch - 370 110.

Date of Sampling : 10/08/2022

Sample Collected by : Royal Environment

Sr. No.	Area	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>11:00 to 11:30 AM</b>
01	BF - Plant	Cast House	2235
02	BF - Plant	Stock House	2650
03	Sinter Plant	Sinter Plant Area	2077

Instruments Used : HVS APM 430, RDS-AAS 217, Calibration done on.: 28/12/2021

\*\* Permissible Limits are as per MoEF Notification 31st March 2012.

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Ref. No.: 3001/09/2022-23

Date: 30/09/2022

### REPORT OF STACK EMISSION ANALYSIS

**Name of company : Welspun Mettalics Limited,(ID-59424)**

**Address** : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.  
Village: Varsamedi, Welspun City, Tal.: Anjar.  
Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 1
01	Stack Attached to	---	Blast Furnace (Stove Stack)
02	Date of Sampling	---	09/09/2022
03	Time of Sampling	---	10:00
04	Air Pollution Control Measures	---	--
05	Stack Height	Meter	60
06	Stack Temperature	° C	126
07	Ambient Temperature	° C	30
08	Average Velocity of Flue Gases	M/Sec.	7.4
09	Isokinetic flow rate for P.M. Sampling	LPM	19
10	Gaseous Sampling Flow Rate	LPM	2.0
11	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	30
12	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	25
13	Permissible Limit for SO <sub>2</sub> *	mg/Nm <sup>3</sup>	200
14	Measured Concentration of SO <sub>2</sub>	mg/Nm <sup>3</sup>	13.8
15	Permissible Limit for NO <sub>x</sub> *	mg/Nm <sup>3</sup>	150
16	Measured Concentration of NO <sub>x</sub>	mg/Nm <sup>3</sup>	30.4

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.: 3002/09/2022-23

Date: 30/09/2022

### REPORT OF STACK EMISSION ANALYSIS

Name of company : Welspun Mettals Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.  
Village: Varsamedi, Welspun City, Tal.: Anjar.  
Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	Stack No. 2	Stack No. 3
01	Stack Attached to	---	Common Stack (Sinter & BF) Plant	Sinter (De-dusting system)
02	Date of Sampling	---	10/09/2022	10/09/2022
03	Time of Sampling	---	09:30	10:15
04	Air Pollution Control Measures	---	Common ESP	Bag Filter
05	Stack Height	Meter	70	50
06	Stack Temperature	° C	124	123
07	Ambient Temperature	° C	30	28
08	Average Velocity of Flue Gases	M/Sec.	7.2	7.2
09	Isokinetic flow rate for P.M. Sampling	LPM	21	20
10	Permissible Limit for P.M.*	mg/Nm <sup>3</sup>	30	30
11	Measured Concentration of P.M.	mg/Nm <sup>3</sup>	23	21

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.: 3003/09/2022-23

Date: 30/09/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.

Village: Varsamedi, Welspun City, Tal.: Anjar.

Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	AAQMS No. 1	AAQMS No. 2	AAQMS No. 3
01.	Location of Sampling	---	Nr. BF Area	Nr. Sinter Plant	Nr. Coke Oven Unit
02.	Date of sampling	---	08/09/2022	08/09/2022	08/09/2022
03.	Time of sampling	Hr.	09:30	10:00	10:40
04.	Dominant Wind Direction (From)	---	NW	NW	NW
05.	Wind Speed	Km./Hr.	1 to 13	1 to 13	1 to 13
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>	17.6	16.8	18.2
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>	42.8	43.5	41.9
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>	16.4	15.3	13.6
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>	18.2	19.1	17.9

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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Plot No. 19 & 20, B/s. The North Star Nest School, Masoom School Road, Mota Mava, RAJKOT - 360 005.  
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Ref. No.: 3004/09/2022-23

Date: 30/09/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.

Village: Varsamedi, Welspun City, Tal.: Anjar.

Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	AAQMS No. 4	AAQMS No. 5	AAQMS No. 6
01.	Location of Sampling	---	Nr. Oxygen Plant	Nr. Admin Office	Nr. Stock House
02.	Date of sampling	---	09/09/2022	09/09/2022	09/09/2022
03.	Time of sampling	Hr.	10:15	09:30	11:10
04.	Dominant Wind Direction (From)	---	NW	NW	NW
05.	Wind Speed	Km./Hr.	3 to 15	3 to 15	3 to 15
06.	Average flow rate during sampling	m <sup>3</sup> /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 *	µg/m <sup>3</sup>	60	60	60
09.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	19.5	17.4	18.7
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>	45.2	44.6	43.5
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>	15.6	14.7	13.3
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>	18.6	20.5	19.4

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.: 3005/09/2022-23

Date: 30/09/2022

### REPORT OF AMBIENT AIR QUALITY MONITORING

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.

Village: Varsamedi, Welspun City, Tal.: Anjar.

Dist.: Kutch - 370 110.

Sample Collected by : Royal Environment

Sr. No.	Particulars	Unit	AAQMS No. 7	AAQMS No. 8	AAQMS No. 9
01.	Location of Sampling	---	Nr. Coal/ Coke Yard	Nr. Canteen (Bramhasthan)	Nr. Health Center
02.	Date of sampling	---	10/09/2022	10/09/2022	10/09/2022
03.	Time of sampling	Hr.	11:15	10:20	09:25
04.	Dominant Wind Direction (From)	---	NW	NW	NW
05.	Wind Speed	Km./Hr.	2 to 14	2 to 14	2 to 14
06.	Average flow rate during sampling	m <sup>3</sup> /minute	1.20	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 *	µg/m <sup>3</sup>	60	60	60
09.	Measured Concentration of PM 2.5	µg/m <sup>3</sup>	18.3	19.5	17.6
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>	44.2	43.7	45.6
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>	15.5	16.6	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>	19.6	18.3	19.1

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. : 3006/09/2022-23

Date: 30/09/2022

### AMBIENT NOISE LEVEL MONITORING REPORTS

**Name of company : Welspun Mettalics Limited,(ID-59424)**

**Address** : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.  
**Village:** Varsamedi, Welspun City, Tal.: Anjar.  
**Dist.:** Kutch - 370 110.

**Date of Sampling :** 09/09/2022

**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
Permissible Limits		75.0	70.0
Monitoring is carried out during		01:30 - 02:30 PM	01:00 - 02:00 AM
01.	Nr. BF Area	70.8	67.4
02.	Nr. Sinter Plant	73.5	68.3
03.	Nr. Coke Oven Unit	71.4	65.9
04.	Nr. Oxygen Plant	70.1	63.2
05.	Nr. Admin Office	64.5	61.7

#### 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. : 2011/09/2022-23

Date: 30/09/2022

### WATER SAMPLE ANALYSIS REPORT

Name of company : Welspun Mettalics Limited,(ID-59424)

Address : Survey No. 644/1, 641, 611/2, 617/1, 617/2, 618, 629/1, 629/2,  
614, 615/1, 615/2, 615/3, 606/1, 558, 606, 609, 626.

Village: Varsamedi, Welspun City, Tal.: Anjar.

Dist.: Kutch - 370 110.

Date of Sampling : 09/09/2022

Source of Sample : Admin Office

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	---	---	29
04.	Turbidity	NTU	1	5	NIL
05.	pH	pH Unit	6.5 to 8.5	No Relaxation	7.30
06.	T.D.S.	Mg/L	500	2000	146
07.	Total Hardness	Mg/L	200	600	35
08.	Ca as Ca	Mg/L	75	200	7.2
09.	Mg as Mg	Mg/L	30	100	4.1
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	35.2
15.	Sulphate	Mg/L	200	400	7.1
16.	Nitrate	Mg/L	45	No Relaxation	3.1
17.	Fluoride	Mg/L	1.0	1.5	0.04
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	32.0
21.	E - Coli	Coli	---	---	Absent

(\*) Permissible Limit in the Absence 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

