

No. JSPL/ANGUL/EMD/21-22/17

Date: 25<sup>th</sup> May 2021

To,  
Ministry of Environment, Forest & Climate Change  
Eastern Regional Office  
A/3, Chandershekharpur  
Bhubaneswar – 7510233

Subject: Compliance to Environmental Clearance of M/s. Jindal Steel & Power Limited,  
Angul

Ref.: Environmental Clearance No. J – 11011/365/2006 – IA.II (I) dated 22<sup>nd</sup> February,  
2007, amendment on 14<sup>th</sup> November, 2008, 10<sup>th</sup> February 2011, 8<sup>th</sup> February 2017,  
26<sup>th</sup> June 2018 & 22<sup>nd</sup> January 2019

Dear Sir,

With Reference to above, we are submitting herewith the half yearly compliance report in respect to 6 MTPA integrated Steel & Power Plant of M/s Jindal Steel & Power Ltd, Angul, Odisha, for the period of October 2020 – March 2021.

Thanking you,

Yours faithfully,

for Jindal Steel & Power Limited



**Alok Sahu**

**AVP – EMD**

Copy to:

- 1) State Pollution Control Board, Odisha
- 2) Central Pollution Control Board, Kolkata

**Jindal Steel & Power Ltd.**

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**Integrated Steel Plant at Angul of Jindal Steel & Power Limited**  
**Compliance to Stipulations of Environmental Clearance**  
**No. J – 11011/365/2006 – IA.II (I) dated 22.02.2007**  
**Period of compliance: October'20 – March'21**

Sl. No.	Stipulations	Compliance status
1.	Coal will be sourced from captive coal mine and environmental clearance is yet to be accorded by the Ministry. Total land requirement will be 2,150.385 including 232 ha forest land which is submitted to the State Forest Department, Orissa on 22 <sup>nd</sup> November 2006 for approval. The proposal also involves displacement of persons and outsees have to be rehabilitated. R & R Action Plan is prepared and submitted to the State Govt for Approval	Utkal B1 coal mine for which the Environment clearance was taken has been de-allocated as per the Supreme Court order. At present coal is being procured through E-auction from MCL coalfield at Talcher. Coal is being transported by both rail and road from MCL coal mines at Talcher. Total land has been reassessed by the IPICOL to 3976.38 Ac land for core plant area. The same has been intimated to MoEF vide dated 26/7/2011. Forest Clearance has been received. Resettlement & Rehabilitation has been done as per the Orissa R & R Policy, 2006 under direct supervision of RPDAC (Rehabilitation & Peripheral Development Advisory Committee, Govt. of Orissa).
2.	Bag filters, fume extraction system, cyclone, ventury scrubber, Electrostatic Precipitators (ESPs), water spraying facilities etc will be provided to control the fugitive gaseous emissions below 100 mg/Nm <sup>3</sup> . Total water requirement from River Brahmani/ Samal Barrage will be 14,700 M <sup>3</sup> /hr. The wastewater will be treated in ETP and will be 100% recycled and reused in the process, coal dust suppression and gardening. No wastewater will be released outside the plant premises. BF slag will be sold to cement manufacturers. Dust from BF & SMS sludge, ETP sludge of DRI plant; coal ash from power plant & gasifier etc. will be used for backfilling captive coal mines. Dust from lime dolomite plant will be reused in ladle coating and wastewater treatment. SMS slag and dust from ferro-alloy plant will be used for road making, Mill scales will be sold to steel plants. Hearth layer and APCD dust from pellet plant will be reused in Pellet plant. No char and accretions will be generated. Out of total solid waste generated, 46.8% will be reutilized and 53.3% will be disposed off in abandoned	<p>6 X 135 MW Captive Power Plant, 3 X 180 TPH Process Steam Boiler, 1.2 MTPA Plate Mill, 1.5 MTPA SMS, 2 X 500 TPD Lime Dolomite Plant, 2 X 1200 TPD Oxygen Plant, 1.8 MTPA DRI Plant, 2,25,000 Nm<sup>3</sup>/hr Coal Gasification Plant, 1.4 MTPA Bar Rolling Mill, 1.0 MTPA Coke Oven Plant, 3.2 MTPA Blast Furnace, 4 MTPA Sinter Plant and 3 MTPA BOF have been commissioned so far.</p> <p>Power Plant &amp; Process Boiler: All pollution control equipments including ESP; Bag filter in fly ash silo; DE system with bag filter in coal handling plant are in place. Water sprinkler system has been installed in coal storage yard.</p> <p>Plate Mill: At present mill scales are reused in blast furnace and sinter plant. Oil / Mixed gas fired furnace of plate mill provided with 76.5 m height stack.</p> <p>Lime Dolomite Plant: DE system with bag filter has been installed in raw material handling system, Lime kiln, Dolomite kiln and Product handling system. Covered conveyor belt has been provided.</p>

	<p>coal mines.</p>	<p>SMS: Fume extraction system along with bag filter has been installed.</p> <p>DRI: Wet scrubbers have been installed in bottom seal gas dust collection stack, hot transport dust collection stack, product cooler dust collection stack and product handling dust collection stack.</p> <p>CGP: Dust extraction system in gasifier unit and incinerator in sulphur recovery unit has been installed.</p> <p>Coke Oven: Bag filters have been provided in crushing, screening, charging &amp; pushing area.</p> <p>Blast Furnace: Bag filters have provided in cast house, stock house and PCI building. Cyclone and wet scrubber have provided in stoves.</p> <p>Sinter Plant: ESP has been provided in process stack. Bag filters have been provided in plant dedusting stack, coke &amp; flux crushing &amp; screening house.</p> <p>BOF: ESP has been provided for emission from converter. Bag filters have been provided for plant dedusting.</p> <p>The water resource department has further de-allocated the water requirement of JSPL from 95.15 Cusec to 66.15 Cusec water vide their letter dated 9/4/2016.</p> <p>Power Plant and Process Boiler waste water: 2 X 400 m<sup>3</sup> Neutralization Pit, 2 X 4000 m<sup>3</sup> Guard Pond, 2 X 2500 m<sup>3</sup>/hr Clarifier has been provided to treat waste water generating from Power Plant and Process Boiler. Treated water is used in ash slurry making, road dust suppression and horticulture irrigation. No wastewater is being released outside.</p> <p>Plate Mill waste water: DCW: The waste water that comes from Direct Cooling (by means of pumps) of the roller tables, hot leveler and descaler system, mill and edger rolls, fume suppression and sweep sprays flows</p>
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by gravity to Primary settling tank (Scale Pit) of size 18m (L) x 12.3m (W) x 8m (D). Oil & grease also get separated by two nos. of oil skimmer installed in scale pit. From scale pit the scales are being collected in scale storage bins of size 11m (L) x 5.5m (W) x 3.7m (D) for further use in Sinter Plant. Waste oil is stored in the drums for selling off to registered recyclers. From Scale pit the water to pump to 5 nos. Secondary Settling Tanks of size 45m (L) x 5.9m (W) x 3.2m (D) for removal of fine scales. Each of these tanks is also installed with oil skimmer for further removal of oil and grease from waste water. From secondary settling tanks water pumped to Filtration plant consisting of total 19 nos. of High Rate Pressure Filters (18Working+1Stand) of capacity 260m<sup>3</sup>/hr each and for reducing the blow down quantity two nos. De Mineralized pressure filters of flow rate 70m<sup>3</sup>/hr each are installed. After passing through filtration unit water goes to cooling tower. The cooled water is recirculated in the plant itself. The back wash water from filtration unit is treated in a clarifier and is circulated to secondary settling tank. Clarifier of capacity 125m<sup>3</sup>/hr for treatment of backwash water of High Rate Pressure Filters is commissioned.

Mulpic: The Mulpic cooling water system supplies cooling water to Plate Cooling Roller Table, ACC Cooling Zone A,B,C,D, Zone Separation Sprays and DQ cooling. The water is supplied to and returned through the pipelines and overflow chamber to the cooling water basin. The water is supplied from Mulpic Pump House (by means of pumps) to Elevated water tank, from elevated water tank the water flows by gravity to Mulpic Zone A,B,C & D and From Mulpic Zone A,B,C & D to Hot water sump. From the Hot water sump the 7000 m<sup>3</sup>/hr of Hot water goes to Filtration plant (28W + 2S; 250 m<sup>3</sup>/hr/filter) and from filtration plant to cooling tower. The backwash water from filtration plant goes to waste water sump from where it is pumped to Mulpic thickener (21 m dia; 1 No.) @ 275 m<sup>3</sup>/hr. For flocculation purpose polyelectrolyte is added at flash mixer @0.4 m<sup>3</sup>/hr. At flash mixer the filtrate received from



the filter press also mixed along with the incoming backwash water to thickener. For proper settling and thickening of the sludge, thickener mechanism is provided which is running continuously. The high density flocks then settles at the bottom of the thickener. Clear overflow from the thickener then passed to oil separator for separation of oil particles. The settled sludge in thickener is drained and sludge is taken in sludge sump. Then sludge is pumped to filter press. Treated water is re-circulated to Mulpic cooling system.

DRI waste water: Water used for direct cooling and top gas scrubbing is sent to clarifier (capacity 4600 m<sup>3</sup>/hr) where particles are removed by clarifoculation method. Cleaned water after passing through cooling tower sent to process. Cooling tower blow down water is used to RMHS for dust suppression.

CGP waste water: 400 m<sup>3</sup>/hr capacity bio ETP and 350 m<sup>3</sup>/hr TETP have been provided to treat stripped gas ammonia liquor and oily waste water.

Coke Oven waste water: Waste water generated from cooling tower blowdown is being used in coke quenching. Effluent from coke oven gas cleaning is taken to byproduct recovery plant of CGP and ammonia and phenol are recovered from stream before taking it to ETP for further treatment. To treat Coke Oven waste water in CGP ETP necessary amendment in EC condition has been received vide letter no. J - 11011/365/2006 - IA.II (I) dated 22/01/2019.

Blast Furnace waste water: Waste water generated from cooling tower blowdown is being used in slag quenching.

BF slag is being sold to cement manufacturer.

Dust from BF and DRI ETP sludge is being used in Sinter Plant.

Coal ash from power plant and process boiler is being used in 1.17 MTPA fly ash brick making plant, 0.25 MTPA fly ash based light weight aggregate making plant, road making, extension work of airstrip and other civil works. Ash from

		<p>Coal Gasification Plant is being used in road making inside plant premises.</p> <p>Dust from lime dolomite plant is being used Sinter Plant.</p> <p>SMS slag is being granulated and used for road making and other civil work as replacement of stone aggregate.</p> <p>Mill scales are being reused in Sinter Plant.</p> <p>Construction of Pellet Plant not started yet.</p> <p>All air pollution control &amp; solid waste management requirements will be taken care in other plants also on commissioning.</p>
3.	<p>Public hearing meeting was held on 21<sup>st</sup> March, 2006. 'Consent for Establishment' has been accorded by the Orissa State Pollution Control Board vide letter no. 22090/Ind-II-NOC4103 dated 7<sup>th</sup> September, 2006 Total cost of the project is Rs 15.000.00 Crores.</p>	<p>Revised Consent to Establish has been given by the State Pollution Control Board, Odisha.</p>
4.	<p>The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14<sup>th</sup> September, 2006 subject to strict compliance of the following specific and general conditions</p>	<p>Noted.</p>
	<b>A. SPECIFIC CONDITIONS</b>	
i)	<p>The gaseous emissions from various process units shall conform to the load/ mass based standards notified by this Ministry on 19<sup>th</sup> May, 1993 and standards prescribed from time to time. The state Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. On line continuous stack emission monitoring for all the major stacks will be carried out and reports submitted to the OSPCB &amp; CPCB. The emission levels from all the sources shall be kept below 100 mg/Nm<sup>3</sup>. Interlocking facility shall be provided so that process can automatically stopped in ease emission level</p>	<p>On line continuous stack emission monitoring system for monitoring particulate matter, SOx and NOx has been installed in Power Plant, Process Boiler, Lime Dolomite Plant, SMS, DRI, Plate Mill, Bar Rolling Mill Coke Oven Plant, Blast Furnace, Sinter Plant &amp; BOF and regular monitoring is being done (<b>Annexure – 1</b>). Real Time Data Acquisition System (RTDAS) has been installed in all online stack monitoring system and data transferred to SPCB, Odisha and CPCB, Delhi. The particulate emission is maintained below 50 mg/Nm<sup>3</sup> and monthly monitoring report has been submitted to the SPCB. Electronic display board has been installed at plant main gate to display real time emission and AAQ data.</p>

	exceeds the limit.	<p>Air pollution control systems are designed to achieve prescribed norms in other units.</p> <p>Interlocking facility for all units of the Captive Power Plant has been implemented. If the emission level from any of the unit exceeds the set standard then the unit will automatically stop. Similarly, in the steel plant, if the emission from the SMS after passing through the bag filter exceeds the set standard then the arc furnace will stop automatically. In all other units such as the Plate mill, gas based DRI and LDP, coal is not used as fuel. In the coal gasification, flue gas is cleaned before being sent to the gas based DRI. Thus emission generated is substantially reduced. Further the CPCB has issued OCEMS Protocol for effective compliance by the industry to the prescribed standards. As per the issued protocol, auto SMS/ email alerts will be generated for corrective measures/ operation shutdown if the emissions are exceeded beyond the norms for a certain period.</p>
ii)	Continuous online ambient air quality monitoring stations shall be setup at three locations around the project site and reports submitted to the OSPCB	4 Nos. of continuous air quality monitoring stations has been installed in January 2013 to monitor PM10, PM2.5, SO <sub>2</sub> , NO <sub>x</sub> , NH <sub>3</sub> , O <sub>3</sub> , CO and BTX ( <b>Annexure – 2</b> ). Real Time Data Acquisition System (RTDAS) has been installed in online ambient air quality monitoring stations and data transferred to SPCB, Odisha and CPCB, Delhi.
iii)	In-plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fume and dust extraction system with bag filters shall be provided in steel melting shop, Electric Arc Furnace and Ladle Refining Furnace. Coke oven (non-recovery type) shall be operated at negative pressure with no fugitive emissions. Bag filters shall be provided to Pellet plant, DRI plant, Lime kiln, Power plant, SMS, SAF, Cast house, raw material stock house of BF, raw material mixing section of SMS and material transfer points of lime dolomite plant. ESP shall be provided to DRI kilns and lime dolomite plant. Gas cleaning plant shall be provided to BF. Cyclone followed by ventury scrubber	<p>To control fugitive emissions bag filter, dust extraction system and water sprinkler system have been installed in ash silo and coal handling plant respectively.</p> <p>Fume extraction system with bag filters has been provided in steel melting shop.</p> <p>Recovery type coke oven approved in revised EC dated 14<sup>th</sup> November, 2008.</p> <p>DE system with bag filters have been installed in ash silo of Power Plant &amp; Process Boilers, coal gasifier, lime kiln, dolomite kiln, raw material handling system and product handling system of Lime Dolomite Plant, cast house &amp; stock house of BF.</p>

	<p>shall be provided to the BF. Further, specific measures like water sprinkling shall be carried out at the coal yard, wagon tippler and truck tippler etc. Fugitive emissions shall be controlled, regularly monitored and records maintained.</p>	<p>Wet scrubbers have been provided in DRI.</p> <p>Gas cleaning plant, cyclone followed by ventury scrubber has been provided in BF stoves.</p> <p>DE system with bag filter, plain water dust suppression system and dry fog dust suppression system have been installed in RMHS screening and crushing building, raw material yards, wagon tippler and conveyor lines.</p> <p>Fugitive emissions are controlled, regularly monitored and records maintained (<b>Annexure – 3</b>).</p>
iv)	<p>The power plant Installed shall be based on conventional pulverized fuel technology. Coal shall be sourced from captive coal mines and prior environmental clearance from the Ministry shall be obtained. ESP shall be installed to keep SPM levels below 100 mg/Nm<sup>3</sup>. Wastewater generated from cooling tower blow down shall be used for ash handling and disposal. Fly ash shall be backfilled in captive coal mines.</p>	<p>Power Plant is based on CFBC technology which is design to use middling and reject coal from coal washery.</p> <p>Utkal B1 coal mine has been de-allocated as per the Supreme Court order. At present coal is being procured through E-auction from MCL coalfield at Talcher. Coal is being transported by both rail and road from MCL coal mines at Talcher.</p> <p>ESP of adequate efficiency has been installed in Power Plant and Process Boiler to control particulate emission below 50mg/Nm<sup>3</sup>.</p> <p>Cooling tower blowdown from Power Plant and Process Boiler is being used in ash handling system. Cooling tower blowdown from DRI is being used in RMHS dust suppression.</p> <p>At present fly ash is being used in brick making, construction of ash dyke, civil works and road making inside plant premises. A high capacity fly ash brick making plant (1.17 MTPA) has been commissioned. 0.25 MTPA fly ash based light weight aggregate plant has been commissioned in March'15. Details of ash utilization are given in <b>Annexure – 4</b>.</p>
v)	<p>Total requirement of the water River Brahmani / Samal Barrage shall not exceed 14,700 M<sup>3</sup>/hr. 'Permission' has been accorded for the drawl of 7000 m<sup>3</sup>/hr water for Phase I by the Department of Water Resources. Govt. of Orissa vide letter dated 11<sup>th</sup> Dec 2008 and 'Permission' for phase-II shall be obtained. The wastewater from scrubbers in DR Plant and Blast furnace shall be treated in ETP and reused for dust scrubbing. However, wastewater from SMS</p>	<p>Permission for withdrawal of 5500 m<sup>3</sup>/hr till Nov'15 and thereafter 9700 m<sup>3</sup>/ hr water from Brahmani river has been obtained from water resource dept.</p> <p>Waste water from DRI Plant is being treated in ETP and reused in process and RMHS for dust suppression. Waste water from Blast Furnace is being reused in slag quenching.</p> <p>Waste water from SMS is being treated in ETP</p>



	<p>and Oxygen plant shall be used for slag granulation; from Billet and Slab caster, Soft water plant, DM water plant etc. in pellet making and Cooling water for re-circulation. The wastewater from power plant shall be used for ash slicing and coal dust suppression. All the treated wastewater shall be recycled &amp; reused either in the Process or for green belt development. No effluent shall be discharged outside the premises and 'Zero' discharge shall be adopted. Domestic wastes shall be treated In Sewage Treatment Plant (STP)</p>	<p>and reused in slag granulation. Cooling tower blowdown from Oxygen Plant is being used in horticulture irrigation. Wastewater from Power Plant and Process Boiler is being used for ash disposal, RMHS coal dust suppression and horticulture irrigation. Waste water from CGP is being reused in cooling tower make up, RMHS dust suppression, ash sluicing and coal washery make up water.</p> <p>All the treated waste water is being recycled either in process or in green belt development. No effluent is discharge outside plant premises and 'Zero' discharge is maintained for the whole plant.</p> <p>Offices are provided with septic tank and soak pits.</p>
vi)	<p>Groundwater monitoring around the solid waste disposal site / secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's Regional Office at Bhubaneshwar, CPCB and OPCB.</p>	<p>For ground water monitoring borewell has been constructed around the ash pond and water has been analyzed through NABL approved lab. Report attached as <b>Annexure- 5</b>.</p>
vii)	<p>Dust from pellet plant in Pellet plant; from Lime dolomite plant in ladle coating and wastewater treatment; from BF &amp; SMS, sludge from GCP of BF, ETP sludge of DRI plant, coal ash from power plant, coal ash from gasifier, sludge from ETP etc for backfilling captive coal mines. SMS slag and slag dust from ferro-alloy plant shall be used for road making. BF slag shall be sold to cement manufacturers. Mill scales of casting machine and rolling mill shall be sold to steel plants. Fly ash and granulated slag shall be used in cement plants. No char and accretions will be generated. Used oil shall be sold to recyclers and preprocessors.</p>	<p>Solid waste will be reused / recycled as per the stipulation.</p> <p>Dust from lime dolomite plant is being used briquette making plant and then used in SMS.</p> <p>Sludge generated GCP of BF and DRI ETP is being reused in Sinter Plant.</p> <p>Coal ash from gasifier is being used in road making.</p> <p>ETP sludge from CGP ETP disposed to common hazardous waste disposal site at Jajpur developed by M/s Ramky.</p> <p>SMS dust is being used in brick making and slag is being granulated and used in road making.</p> <p>BF slag is being sold to cement manufacturer.</p> <p>Mill scales are being reused Sinter Plant.</p> <p>Fly ash &amp; Bottom ash pneumatically conveyed to ash silo from intermediate silo and ESP. From ash silo dry fly ash pneumatically conveyed to brick plant and light weight aggregate plant. For civil work and extension work of airstrip conditioned ash collected in closed bulkers at the bottom of silo through telescopic chute. Provision has been made for ash disposed in ash pond through high concentration slurry disposal system maintaining ash and water ratio at 60:40.</p>

		<p>No char and accretions are generated.</p> <p>Management system for collection and storage of oily wastes has been implemented. Used oil has been sold to the authorized recyclers and processors.</p>
viii)	Possibilities shall be explored regarding use of coal ash by the cement manufacturing units. Bottom ash shall be disposed off in a suitably designed landfill as per CPCB guidelines to prevent leaching to the sub-soil and underground aquifer.	Bottom ash is being ground to fine size and stored in silo and utilized in civil work, road making and construction of ash dyke.
ix)	The company shall develop rain water harvesting structure harvest the rain water for utilization in the lean season besides recharging the ground water table.	9 no. of rain water harvesting and ground water recharging structures have been constructed. Apart from that 3 nos. of rain water collecting structure of capacity 3600 m <sup>3</sup> each has been constructed in the plant and project area and rain water from these structures is being taken to a water storage reservoir through pump. The vast unlined base of the 75 ha water reservoir acts as a very good natural groundwater recharge in the plant premises.
x)	Green belt shall be developed in at least 33 % area within and around the plant premises as per the CPCB guidelines in consultation with DFO	About 3.93 lakh trees have been planted in and around the plant premises so far. Green belt is being developed in 33% area, in and around plant area in phases.
xi)	Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Pre-employment health survey and periodic health check up of all employees is being done as per Factories Act and records are being maintained.
xii)	Recommendations made in the CREP guidelines issued for the Steel plants shall be implemented.	CREP guideline for Steel plant has been implemented. Details are given in <b>Annexure – 6</b> .
xiii)	No commencement or operation of the cement Plant shall be carried out without obtaining prior environmental clearance for the captive coal mine from the Ministry.	Utkal B1 coal mine has been de-allocated as per the Supreme Court order for which EC was granted. Now coal is sourced from MCL Talcher mines which have valid ECs.
xiv)	Comments and recommendations of the Chief Wildlife Warden (CWLW), Govt. of Orissa regarding impact of the proposed plant on the nearby and protected forests shall be obtained and suggestions if any shall be implemented in a time bound manner.	A wildlife management plan for forest areas within 10 km from the plant boundary has been prepared for the protection of forest & wildlife with a budget of Rs. 3.78 Cr. The same has been approved by CWLW, Orissa. JSPL has deposited the amount on 4 <sup>th</sup> August 2010 to the Forest Dept. for implementation of the project.
xv)	All the affected persons shall be suitably compensated and rehabilitated as per the norms and guidelines issued by the State Government in collaboration with State Government,	<p>Resettlement and Rehabilitation has been done for the displaced and affected families.</p> <p>JSPL has developed rehabilitation site at village Baramahitala 2-3 km away from the project site for displaced people of village Kaliakata, Basudevpur and Panpur with all the common facilities like school, market complex, primary health center, electricity, running water,</p>

		drainage system etc. as per Orissa R&R Policy, 2006 under direct supervision of RPDAC (Rehabilitation & Peripheral Development Advisory Committee, Govt. of Orissa).
xvi)	No construction activity at the project site shall be initiated till the approval for the 168,232 ha forest land is obtained under the Forest (Conservation) Act, 1980 & subsequent amendments from the State/Central Government.	Forest Clearance has been received.
	<b>B. GENERAL CONDITIONS:</b>	
i)	The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board (OSPCB) and the State Government	Noted
ii)	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Noted
iii)	At least four ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated In consultation with the OSPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the OPCB/CPCB once In six months.	<p>4 Nos. of continuous air quality monitoring stations have been installed in January 2013 to monitor PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, O<sub>3</sub>, CO and BTX. Real Time Data Acquisition System (RTDAS) has been installed in online ambient air quality monitoring stations and data transferred to SPCB, Odisha and CPCB, Delhi.</p> <p>On line continuous stack emission monitoring system for monitoring particulate matter, SO<sub>x</sub> and NO<sub>x</sub> has been installed in all 6 units of Power Plant, 3 units of Process Boiler, Plate Mill, Bar Rolling Mill, SMS, Lime &amp; Dolomite Plant, DRI, CGP, Coke Oven Plant, Blast Furnace &amp; Sinter Plant and regular monitoring is being done. Real Time Data Acquisition System (RTDAS) has been installed in all online stack monitoring system and data transferred to SPCB, Odisha and CPCB, Delhi. The particulate emission is maintained below 50 mg/Nm<sup>3</sup> and monthly monitoring report has been submitted to the SPCB, Odisha.</p>
iv)	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19' May, 1993 and 31" December 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	<p>Wastewater from Power Plant and Process Boiler is being used for ash disposal, RMHS coal dust suppression, slag quenching and horticulture irrigation. Analysis report of Power Plant treated water is given in <b>Annexure – 7</b>.</p> <p>Cooling tower blowdown from Oxygen Plant is being used in horticulture irrigation.</p> <p>Waste water from DRI Plant is being treated in ETP and reused in process and RMHS for dust suppression.</p> <p>Waste water from CGP is being reused in cooling tower make up, RMHS dust suppression, ash</p>

		<p>sluicing, BOF slag quenching and coal fire fighting. Analysis report of CGP treated water is given in <b>Annexure – 8</b>.</p> <p>Waste water from Coke Oven Plant is being treated in Bio ETP and then taken to TETP. Treated water from TETP is used in cooling tower make up.</p> <p>Waste water from Blast Furnace is being reused in slag quenching and coke quenching.</p> <p>All the treated waste water is being recycled either in process or in green belt development. No effluent is discharged outside plant premises.</p>
v)	<p>The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime.) and 70 dBA (nighttime).</p>	<p>The overall noise level in and around the plant area will be kept well within the standards (85 dBA). Acoustic enclosures are provided in all high noise generating equipments. The ambient noise levels conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime.) and 70 dBA (nighttime). Details monitoring report is given in <b>Annexure – 9</b>.</p>
vi)	<p>The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA / EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.</p>	<p>All the environmental protection measures and safeguards recommended in the EIA / EMP report are under implementation. A separate Environment Management Department with full fledged environmental laboratory for regular monitoring of environmental quality parameters has been set up. The Organogram of Environment Management team and details of the list of the instruments in the laboratory are attached in <b>Annexure – 10 &amp; 11</b>.</p> <p>Till March 2021, JSPL has spent Rs. 95.01 Cr on CSR activities in the surrounding villages of the project in the following areas:</p> <ul style="list-style-type: none"> <li>• Health, hygiene &amp; sanitation</li> <li>• Imparting quality education</li> <li>• Generation sustainable livelihood options</li> <li>• Sports, youth &amp; culture</li> <li>• Community infrastructure development</li> <li>• Women empowerment</li> <li>• Natural resource management</li> <li>• Stakeholders engagement and other need based critical supports</li> </ul> <p>A brief report on the CSR activities at JSPL, Angul is enclosed. <b>Annexure – 12</b>.</p>
vii)	<p>As mentioned in the EIA/EMP, Rs. 2,000.00 Crores and Rs 100.00 Crores earmarked towards the capital cost and recurring cost/annum for environmental pollution control measures shall be judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State</p>	<p>Noted</p>



	Government, The funds so provided shall not be diverted for any other purpose	
viii)	The Regional Office of this Ministry at Bhubaneswar / CPCB/ OSPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	A six monthly report is submitted with all monitoring results for compliance for operation of the plant.
ix)	The project proponent shall inform that the project has been shall Inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the OSPCB/Committee and may also be seen in Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office.	Complied.
x)	Project authorities should inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Date of financial closure was 06/3/09 and date of commencement of land development work was 02/4/10.
5.0.	The Ministry may revoke or suspend the clearance; If Implementation of any of the above conditions is not satisfactory.	Noted
6.0	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company In a time bound manner will Implement these conditions.	Noted
7.0	The above conditions will be enforced, Inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974. the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules	Noted

**Integrated Steel Plant at Angul of Jindal Steel & Power Limited**  
**Compliance to Amendment in Stipulations of Environmental Clearance**

**No. J – 11011/365/2006 – IA.II (I)**

**Date of Amendment: 14.11.2008**

Sl. No.	Stipulations	Compliance status
1.	Continuous stack monitoring facilities for all the major stacks and adequate air pollution control systems shall be provided to control air emission within 50 mg /Nm <sup>3</sup> and reports for ambient air, stack emission and fugitive emissions submitted to the Ministry's Regional Office at Bhubaneswar, OSPCB & CPCB regularly.	On line continuous stack emission monitoring system for monitoring particulate matter, SO <sub>x</sub> and NO <sub>x</sub> have been installed in all 6 units of Power Plant, 3 units of Process Boiler, Plate Mill, Bar Rolling Mill, SMS, LDP, DRI, CGP, Coke Oven Plant, Blast Furnace, Sinter Plant and regular monitoring is being done. Real Time Data Acquisition System (RTDAS) has been installed in all online stack monitoring system and data transferred to SPCB, Odisha and CPCB, Delhi. The particulate emission is maintained below 50 mg/Nm <sup>3</sup> and monthly monitoring report has been submitted to the SPCB, Odisha.
2.	The emission standards issued by the Ministry in May, 2008 for the sponge plants shall be followed.	Emission from BF is within the standard ( <b>Annexure – 1</b> ).
3.	Total requirement of the River Brahmani/ Samal Barrage shall not exceed 14,700 m <sup>3</sup> /hr and prior 'Permission' should be obtained from the concerned department and a copy submitted to the Ministry's Regional Office at Bhubaneswar within 3 months of issue of this letter.	Permission for withdrawal of 66.15 cusec water from River Brahmani/ Samal Barrage has been obtained from Water Resource Dept.
4.	Proper and full utilization of coke oven gases in power plant using heat recovery steam generator (WHRB) shall be ensured and no flue gas shall be discharged into the air. Tar, NH <sub>3</sub> should be cleaned in the process and H <sub>2</sub> S recovery from the coke oven shall be ensured. Coal tar, elemental sulphur and crude benzol shall be recovered from coke oven gas.	Coke oven gas is partially used for battery heating. Remaining gas is supplied to Power Plant boilers and other units of steel plant for use. No coke oven gas is directly discharged to air.
5.	Wet quenching shall be adopted within one year of installation of coke oven and all the treated wastewater shall be used for wet quenching.	JSPL is in the process of installing the CDQ system. As the plant has been sourced from China, there has been delay due to the pandemic situation. JSPL has informed the MoEF&CC regarding the same and has applied for time extension.
6.	The prescribed emission standards for coke oven plants as notified vide notification no. GSR 46 (E) dated 3 <sup>rd</sup> February, 2006 shall be complied with.	Prescribe emission standard for coke oven has been complied.
7.	Biochemical treatment of phenolic wastewater shall be treated in BOD plant and used for quenching of hot coke to control emissions, dust suppression and green belt	Biochemical treatment is given to combined phenolic waste water from Coke Oven and Coal Gasification Plant. Further treated effluent is processed in ultra filtration and RO based TETP and

	development. Cyanides as CN shall be controlled within 0.2 mg/l and ammonical nitrogen within 50 mg/l as per standards notified under the E (P) Act. Effluent analysis reports shall be submitted to the Ministry's Regional Office at Bhubaneswar, OSPCB & CPCB regularly.	<p>recovered water is used as make up to service water of the plant. Coke oven cooling tower blowdown water is used for wet quenching of coke.</p> <p>Treated water meet the Cyanide and ammonical nitrogen standard and analysis report from NABL approved lab has been attached (<b>Annexure – 8</b>).</p> <p>Effluent analysis reports have been submitted to the SPCB, CPCB and MoEF, Bhubaneswar regularly.</p>
8.	Coal and coke fines shall be recycled and reused in the process.	Coal and coke fines are being reused in Sinter Plant and Blast Furnace.
9.	All the recommendations made in the Charter of Corporate Responsibility for Environment Protection (CREP) for the coke oven plants shall be implemented.	All the recommendations made in the Charter of Corporate Responsibility for Environment Protection (CREP) for the coke oven plant has been implemented.
10.	'Consent to Establishment' for the revised integrated steel plant (6 MTPA) & captive power plant (1156 MW) shall be obtained from the Orissa State Pollution Control Board and a copy submitted to the Ministry's Regional Office at Bhubaneswar.	<p>Received the Consent to Establish from the SPCB, Odisha.</p> <p>6 X 135 MW Captive Power Plant, 3 X 180 TPH Process Steam Boiler, 1.2 MTPA Plate Mill, 1.5 MTPA SMS, 2 X 500 TPD Lime Dolomite Plant, 2 X 1200 TPD Oxygen Plant, 1.8 MTPA DRI Plant, 2,25,000 Nm<sup>3</sup>/hr Coal Gasification Plant, 1.4 MTPA Bar Rolling Mill, 1 MTPA Coke Oven Plant, 3.2 MTPA Blast Furnace, 4 MTPA Sinter Plant and 3 MTPA BOF have been commissioned so far.</p>

**Integrated Steel Plant at Angul of Jindal Steel & Power Limited**  
**Compliance of conditions mentioned in Letter No. J – 11011/365/2006 – IA.II (I)**  
**dated 10<sup>th</sup> Feb 2011**

Sl. No.	Conditions	Compliance
1	M/s JSPL shall install the coal gasification technology using non-coking coal for the coke oven plant. The company shall adopt the dry quenching of coke to conserve water and mitigate pollution.	<p>JSPL has constructed a coal gasification plant consisting of 7 no of gasifiers based on non coking coal. The synthetic gas produced in the coal gasification plant is being used in the vertical shaft DRI unit for production of DRI.</p> <p>JSPL is in the process of installing the CDQ system. As the plant has been sourced from China, there has been delay due to the pandemic situation. JSPL has informed the MoEF&amp;CC regarding the same and has applied for time extension.</p>
2	The fly ash generated from various activities shall be used in the cement manufacturing and in back filling of mined out area after ascertaining its suitability through a scientific study. The company shall not use the fly ash in filling of low laying area as proposed in the information submitted.	At present fly ash is being used in brick making, construction of ash dyke, civil works and road making inside plant premises. A high capacity fly ash brick making plant (1.17 MTPA) has been commissioned. 0.25 MTPA fly ash based light weight aggregate plant has been commissioned in March'15.
3	While also implementing CSR related programs during the construction phase, the company shall earmark 2% of the net profit as CSR budget towards corporate social responsibility. Item-wise details of expenditure proposed on specific need based program identified towards this end with time bound execution schedules shall be prepared and submitted to the Ministry's Regional Office at Bhubaneswar.	<p>Till March 2021, JSPL has spent Rs. 95.01 Cr on CSR activities during the construction activities through no net profit has been done during this period.</p> <p>Following CSR projects have been undertaken in surrounding villages:</p> <ul style="list-style-type: none"> <li>• Community health care</li> <li>• Education &amp; skill building &amp; employability</li> <li>• Rural development</li> <li>• Sustainable livelihood activities</li> <li>• Natural resource management</li> <li>• Sports, arts &amp; culture</li> <li>• Calamity management &amp; social welfare</li> </ul> <p>A brief report on the CSR activities and expenditure at JSPL, Angul is enclosed (<b>Annexure – 12</b>).</p>
4	The company shall undertake continuous monitoring of ambient air quality and stack emission in respect of PM10, SO <sub>2</sub> , NO <sub>x</sub> and mercury. The monitored data shall be displayed on the company's website as well as important public places.	<p>4 Nos. of continuous ambient air quality monitoring stations have been installed to monitor PM10, PM2.5, SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, O<sub>3</sub>, CO and BTX.</p> <p>On line continuous stack emission monitoring system for monitoring particulate matter, SO<sub>x</sub> and NO<sub>x</sub> has been installed in Power Plant, Process Boiler, Plate Mill, Lime Dolomite Plant, SMS, DRI, Bar Rolling Mill, Coke Oven Plant, Blast Furnace, Sinter Plant and regular monitoring is being done.</p>



		<p>Mercury in Power Plant flue gas has been analyzed on monthly basis through NABL approved lab. Report enclosed as <b>Annexure – 13</b>.</p> <p>Real Time Data Acquisition System (RTDAS) has been installed in online ambient air quality monitoring stations and all online emission monitoring systems. This data is transferred to SPCB, Odisha and CPCB, Delhi.</p> <p>The monitored data also displayed on company's website and at online electronic display board located at Plant Main Gate.</p>
5	<p>The water conservation measures shall be adopted in the steel plant as well as the captive power plant by increasing the COC of 5.2. The drawl of water from the Derjang dam shall be avoided and rain water harvesting measures shall be undertake to recharge the ground water as well as use of rain water harvested by constructing a water reservoir.</p>	<p>Captive power plant maintains COC at more than 5.</p> <p>No water has been drawn from Derjang dam.</p> <p>9 no. of rain water harvesting and ground water recharging structures have been constructed. Apart from that 3 nos. of rain water collecting structure of has been constructed in the plant and project area and rain water from these structures taken to a water storage reservoir through pump. The vast unlined base of the 75 ha water reservoir acts as a very good natural groundwater recharge in the plant premises.</p>
6	<p>The energy conservation measures for integrated steel plant should be introduced with available best international practices and with details may be submitted to the Ministry in this regard.</p>	<p>JSPL has adopted best available technologies for steel making which is energy efficient. Following energy conservations measures have been adopted in the plant.</p> <ol style="list-style-type: none"> <li>1. Use of Coal gasification technology along with the gas based vertical shaft DRI furnace for energy efficient and char free production of DRI.</li> <li>2. Use of washery for washing the locally available coal for use in coal gasification plant and use of washery rejects and middling for power generation in CFBC boilers.</li> <li>3. Generation of about 61 MW power from pressure recovery turbines from process gas and process steam.</li> <li>4. Use of energy efficient Walking beam furnaces in plate mill.</li> <li>5. Use of syn gas from CGP in DRI, and Coke Oven gas &amp; Blast Furnace gas in LDP, Plate Mill &amp; Bar Mill instead of using petroleum products such as HSD, fuel oil etc.</li> </ol>
7	<p>The company shall comply with all the conditions stipulated vide letter of even no. dated 22<sup>nd</sup> Feb 2007 and subsequently, in a letter dated 14<sup>th</sup> Nov 2008.</p>	<p>JSPL complies with all the conditions stipulated vide letter dated 22<sup>nd</sup> Feb 2007 and 14<sup>th</sup> Nov 2008.</p>

8	In case of any change in the scope of the project, the company shall inform the Ministry for necessary action.	Noted.
9	In case of non compliance of the above directions, the Ministry will be constrained to take necessary actions under various provisions of Environment (Protection) Act, 1986.	Noted.

**Integrated Steel Plant at Angul of Jindal Steel & Power Limited**  
**Compliance of conditions mentioned in Letter No. J – 11011/365/2006 – IA.II (I)**  
**dated 8<sup>th</sup> Feb 2017**

<b>Sl. No.</b>	<b>Conditions</b>	<b>Compliance</b>
5 (i)	Use of wet quenching system in Coke Oven batteries shall be permitted upto 31 <sup>st</sup> December 2018.	Use of wet quenching system in Coke Oven has been permitted till 31 <sup>st</sup> Dec 2021 vide EC amendment letter no. J – 11011/365/2006 – IA.II (I) dated 19 <sup>th</sup> January 2021.
(ii)	Wet quenching to be kept as standby for emergency operation and also to be used during annual shutdown for the CDQ boiler.	Will Comply.
(iii)	Bifurcation of 6 MTPA Steel Melting Shop (SMS) to Electric Arc Furnace (EAF) route (3 MTPA) and Basic Oxygen Furnace (BOF) route (3 MTPA) has been permitted.	A 250 tons capacity Electrical arc furnace (EAF) and 250 tons capacity BOF have been commissioned which are capable of producing 3 MTPA liquid steel each.


**Integrated Steel Plant at Angul of Jindal Steel & Power Limited**  
**Compliance of conditions mentioned in Letter No. J – 11011/365/2006 – IA.II (I)**  
**dated 26<sup>th</sup> June 2018**

Sl. No.	Conditions	Compliance
15. (i)	<p>Enhancement of production of existing Blast Furnace from 3.2 MTPA to 4.25 MTPA and Sinter Plant from 4 MTPA to 5 MTPA with following specific conditions:</p> <p>a) Upgradation of existing APCD / prevent the additional pollution due to increase in the capacity.</p> <p>b) 100% utilization of BF slag / dust.</p> <p>c) Upgradation of gas cleaning plant of Blast Furnace to control additional effluent.</p>	<p>a) The existing APCD is sufficient to take load at enhanced capacity of Blast Furnace and Sinter Plant.</p> <p>b) 100% BF slag / dust will be utilized.</p> <p>c) Existing gas cleaning plant of Blast Furnace is sufficient and no additional effluent treatment system is required.</p>
(ii)	<p>Use of wet quenching system in coke oven batteries shall be permitted up to 31<sup>st</sup> December, 2020.</p>	<p>JSPL is in the process of installing the CDQ system. As the plant has been sourced from China, there has been delay due to the pandemic situation. JSPL has informed the MoEF&amp;CC regarding the same and has applied for time extension. MoEF has been permitted use of wet quenching system till 31<sup>st</sup> Dec 2021 vide EC amendment letter no. J – 11011/365/2006 – IA.II (I) dated 19<sup>th</sup> January 2021.</p>
(iii)	<p>Wet quenching to be kept as standby for emergency operation and also to be used during annual shutdown of CDQ boiler.</p>	<p>Will comply.</p>
(iv)	<p>Deletion of 2X135 MW captive power plant i.e. change capacity of captive power plant from 1080 MW (8X135 MW) to 810 MW (6X135 MW).</p>	<p>810 MW (6X135 MW) has been installed.</p>
(v)	<p>Shift of location of ash dyke with reduction in extent of the dyke area from 350 Ac to 280 Ac subject to following specific condition:</p> <p>a) 70 Ac will be used for development of greenbelt with native tree species.</p>	<p>70 Ac land will be used for development of greenbelt with native tree species.</p>



**Integrated Steel Plant at Angul of Jindal Steel & Power Limited**  
**Compliance of conditions mentioned in Letter No. J – 11011/365/2006 – IA.II (I)**  
**dated 22<sup>nd</sup> Jan 2019**

Sl. No.	Conditions	Compliance
8 (i)	Shift of ash dyke as proposed within the boundary of steel plant.	Ash dyke has been constructed within plant boundary.
(ii)	All the old fly ash stock shall be utilized within two years.	We have started utilizing the old ash stocks for filling of low lying lands around the plant and necessary permission from the State pollution Control Board has been taken. Copy of permission enclosed at <b>Annexure 14</b> .
(iii)	All the new fly ash generated shall be utilized as per the provisions contained in the fly ash notification dated 14/09/1999 and its amendments issued from time to time and the orders of the Hon'ble NGT dated 21/03/2014.	All the new fly ash generated is being utilized as per the provisions contained in the fly ash notification dated 14/09/1999 and its amendments issued from time to time and the orders of the Hon'ble NGT dated 21/03/2014.
(iv)	With respect to amendment of EC condition pertaining to BOD plant, the coke oven plant effluent shall be treated in the existing Bio-ETP to the desired norms and entire treated effluent shall be utilized in the plant to achieve zero discharge.	Coke Oven Plant effluent is being treated in the existing Bio ETP of Coal Gasification Plant. Quality of treated effluent meets the desired norms. Entire treated effluent is being reused inside plant.

  
**Alok Kumar Sahu**  
 AVP- Environment Management Deptt.  
 Jindal Steel & Power Ltd, Angul.



# Real Time Data Acquisition And Monitoring

Annexure 1

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_35-PM_U
Prescribed Standards	0 - 100
Maximum Data	44.33
Minimum Data	1.93
Geometric Mean	27.81
Median	30.23
Standard Deviation	9.79
Maximum Value At Time	2020-10-31
Minimum Value At Time	2020-10-19
Valid Data Points	179
Total Data Points	182
Data Availability %	98.35%

	Time	CEMS_35-PM_U
Sl No.		
1	2020-10-01	30.23
2	2020-10-02	30.54
3	2020-10-03	36.39
4	2020-10-04	38.30
5	2020-10-05	37.90
6	2020-10-06	38.87
7	2020-10-07	36.33
8	2020-10-08	33.33
9	2020-10-09	29.13
10	2020-10-10	37.38
11	2020-10-11	27.46
12	2020-10-12	27.72
13	2020-10-13	31.59
14	2020-10-14	36.10

	Time	CEMS_35-PM_U
SI No.		
15	2020-10-15	38.67
16	2020-10-16	39.27
17	2020-10-17	32.91
18	2020-10-18	21.07
19	2020-10-19	1.93
20	2020-10-20	10.79
21	2020-10-21	24.42
22	2020-10-22	23.24
23	2020-10-23	24.11
24	2020-10-24	27.79
25	2020-10-25	20.51
26	2020-10-26	18.30
27	2020-10-27	15.14
28	2020-10-28	11.23
29	2020-10-29	18.12
30	2020-10-30	42.06
31	2020-10-31	44.33
32	2020-11-01	43.70
33	2020-11-02	41.65
34	2020-11-03	15.57
35	2020-11-04	16.72
36	2020-11-05	17.27
37	2020-11-06	17.40
38	2020-11-07	16.70
39	2020-11-08	15.06
40	2020-11-09	11.43

	Time	CEMS_35-PM_U
SI No.		
41	2020-11-10	10.67
42	2020-11-11	9.72
43	2020-11-12	9.62
44	2020-11-13	9.83
45	2020-11-14	8.61
46	2020-11-15	9.57
47	2020-11-16	9.83
48	2020-11-17	10.62
49	2020-11-18	12.77
50	2020-11-19	12.64
51	2020-11-20	12.06
52	2020-11-21	12.85
53	2020-11-22	18.34
54	2020-11-23	18.18
55	2020-11-24	18.67
56	2020-11-25	16.70
57	2020-11-26	15.07
58	2020-11-27	13.14
59	2020-11-28	11.52
60	2020-11-29	11.24
61	2020-11-30	12.12
62	2020-12-01	10.71
63	2020-12-02	9.93
64	2020-12-03	9.72
65	2020-12-04	9.09
66	2020-12-05	9.11

	Time	CEMS_35-PM_U
SI No.		
67	2020-12-06	8.97
68	2020-12-07	8.33
69	2020-12-08	7.19
70	2020-12-09	7.08
71	2020-12-10	20.19
72	2020-12-11	29.88
73	2020-12-12	29.88
74	2020-12-13	29.88
75	2020-12-14	29.88
76	2020-12-15	29.88
77	2020-12-16	29.88
78	2020-12-17	29.88
79	2020-12-18	29.88
80	2020-12-19	29.88
81	2020-12-20	29.88
82	2020-12-21	29.88
83	2020-12-22	29.51
84	2020-12-23	30.61
85	2020-12-24	31.52
86	2020-12-25	31.51
87	2020-12-26	34.85
88	2020-12-27	33.74
89	2020-12-28	33.77
90	2020-12-29	33.71
91	2020-12-30	34.16
92	2020-12-31	34.93

	Time	CEMS_35-PM_U
SI No.		
93	2021-01-01	34.81
94	2021-01-02	36.40
95	2021-01-03	35.28
96	2021-01-04	34.38
97	2021-01-05	30.63
98	2021-01-06	28.09
99	2021-01-07	27.15
100	2021-01-08	27.34
101	2021-01-09	26.28
102	2021-01-10	26.40
103	2021-01-11	26.56
104	2021-01-12	NA
105	2021-01-13	NA
106	2021-01-14	27.54
107	2021-01-15	38.91
108	2021-01-16	37.03
109	2021-01-17	37.25
110	2021-01-18	37.94
111	2021-01-19	37.58
112	2021-01-20	36.05
113	2021-01-21	35.63
114	2021-01-22	36.31
115	2021-01-23	35.11
116	2021-01-24	35.40
117	2021-01-25	36.48
118	2021-01-26	37.97

	Time	CEMS_35-PM_U
SI No.		
119	2021-01-27	40.69
120	2021-01-28	41.59
121	2021-01-29	42.96
122	2021-01-30	41.07
123	2021-01-31	41.99
124	2021-02-01	39.97
125	2021-02-02	37.97
126	2021-02-03	36.37
127	2021-02-04	35.50
128	2021-02-05	35.10
129	2021-02-06	34.50
130	2021-02-07	36.42
131	2021-02-08	33.24
132	2021-02-09	34.57
133	2021-02-10	33.56
134	2021-02-11	33.20
135	2021-02-12	33.72
136	2021-02-13	33.76
137	2021-02-14	33.20
138	2021-02-15	33.24
139	2021-02-16	33.95
140	2021-02-17	34.57
141	2021-02-18	33.83
142	2021-02-19	34.23
143	2021-02-20	33.99
144	2021-02-21	33.89



	Time	CEMS_35-PM_U
SI No.		
145	2021-02-22	32.76
146	2021-02-23	32.08
147	2021-02-24	30.60
148	2021-02-25	30.01
149	2021-02-26	28.56
150	2021-02-27	27.75
151	2021-02-28	28.13
152	2021-03-01	27.95
153	2021-03-02	29.32
154	2021-03-03	28.26
155	2021-03-04	29.22
156	2021-03-05	29.19
157	2021-03-06	28.14
158	2021-03-07	29.27
159	2021-03-08	30.08
160	2021-03-09	39.10
161	2021-03-10	28.97
162	2021-03-11	32.17
163	2021-03-12	32.70
164	2021-03-13	33.68
165	2021-03-14	32.90
166	2021-03-15	32.46
167	2021-03-16	31.78
168	2021-03-17	31.90
169	2021-03-18	31.75
170	2021-03-19	31.07

	Time	CEMS_35-PM_U
SI No.		
171	2021-03-20	30.20
172	2021-03-21	NA
173	2021-03-22	30.05
174	2021-03-23	31.43
175	2021-03-24	30.26
176	2021-03-25	30.53
177	2021-03-26	30.81
178	2021-03-27	31.75
179	2021-03-28	31.21
180	2021-03-29	30.77
181	2021-03-30	30.10
182	2021-03-31	29.43

**Report Details:** JSPLAngul | 2021-05-25 14:36:28 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_27-PM_U
Prescribed Standards	0 - 100
Maximum Data	42.19
Minimum Data	13.8
Geometric Mean	27.9
Median	28.08
Standard Deviation	5.98
Maximum Value At Time	2021-03-09
Minimum Value At Time	2021-01-10
Valid Data Points	179
Total Data Points	182
Data Availability %	98.35%

	Time	CEMS_27-PM_U
Sl No.		
1	2020-10-01	15.72
2	2020-10-02	19.17
3	2020-10-03	17.99
4	2020-10-04	17.31
5	2020-10-05	16.53
6	2020-10-06	17.55
7	2020-10-07	25.32
8	2020-10-08	29.63
9	2020-10-09	29.05
10	2020-10-10	30.82
11	2020-10-11	28.08
12	2020-10-12	28.42
13	2020-10-13	31.58
14	2020-10-14	34.21

	Time	CEMS_27-PM_U
SI No.		
15	2020-10-15	34.48
16	2020-10-16	33.26
17	2020-10-17	30.26
18	2020-10-18	29.10
19	2020-10-19	29.12
20	2020-10-20	24.60
21	2020-10-21	26.92
22	2020-10-22	26.96
23	2020-10-23	27.31
24	2020-10-24	31.55
25	2020-10-25	25.58
26	2020-10-26	24.63
27	2020-10-27	24.17
28	2020-10-28	24.78
29	2020-10-29	25.28
30	2020-10-30	25.86
31	2020-10-31	25.67
32	2020-11-01	23.43
33	2020-11-02	23.17
34	2020-11-03	23.71
35	2020-11-04	24.26
36	2020-11-05	25.04
37	2020-11-06	25.67
38	2020-11-07	26.27
39	2020-11-08	27.44
40	2020-11-09	26.80

	Time	CEMS_27-PM_U
SI No.		
41	2020-11-10	26.57
42	2020-11-11	24.42
43	2020-11-12	23.64
44	2020-11-13	23.63
45	2020-11-14	23.88
46	2020-11-15	23.75
47	2020-11-16	23.71
48	2020-11-17	23.62
49	2020-11-18	24.61
50	2020-11-19	24.72
51	2020-11-20	24.87
52	2020-11-21	24.57
53	2020-11-22	26.77
54	2020-11-23	28.10
55	2020-11-24	29.04
56	2020-11-25	28.80
57	2020-11-26	28.10
58	2020-11-27	26.85
59	2020-11-28	25.32
60	2020-11-29	25.64
61	2020-11-30	26.62
62	2020-12-01	27.41
63	2020-12-02	27.41
64	2020-12-03	27.33
65	2020-12-04	27.16
66	2020-12-05	26.87

	Time	CEMS_27-PM_U
SI No.		
67	2020-12-06	26.61
68	2020-12-07	25.97
69	2020-12-08	25.95
70	2020-12-09	25.91
71	2020-12-10	25.12
72	2020-12-11	24.77
73	2020-12-12	25.15
74	2020-12-13	25.99
75	2020-12-14	24.40
76	2020-12-15	24.92
77	2020-12-16	24.96
78	2020-12-17	24.87
79	2020-12-18	27.32
80	2020-12-19	29.85
81	2020-12-20	30.62
82	2020-12-21	31.13
83	2020-12-22	26.62
84	2020-12-23	18.53
85	2020-12-24	17.92
86	2020-12-25	17.73
87	2020-12-26	17.54
88	2020-12-27	17.70
89	2020-12-28	17.68
90	2020-12-29	16.39
91	2020-12-30	17.03
92	2020-12-31	16.78

	Time	CEMS_27-PM_U
SI No.		
93	2021-01-01	16.84
94	2021-01-02	25.78
95	2021-01-03	20.21
96	2021-01-04	17.55
97	2021-01-05	15.38
98	2021-01-06	15.28
99	2021-01-07	14.79
100	2021-01-08	14.88
101	2021-01-09	14.92
102	2021-01-10	13.80
103	2021-01-11	14.20
104	2021-01-12	NA
105	2021-01-13	NA
106	2021-01-14	26.14
107	2021-01-15	24.07
108	2021-01-16	24.18
109	2021-01-17	23.91
110	2021-01-18	22.88
111	2021-01-19	34.71
112	2021-01-20	33.93
113	2021-01-21	33.22
114	2021-01-22	36.25
115	2021-01-23	36.33
116	2021-01-24	35.69
117	2021-01-25	34.35
118	2021-01-26	33.59



	Time	CEMS_27-PM_U
SI No.		
119	2021-01-27	34.35
120	2021-01-28	35.02
121	2021-01-29	36.24
122	2021-01-30	35.18
123	2021-01-31	36.38
124	2021-02-01	37.58
125	2021-02-02	36.46
126	2021-02-03	36.65
127	2021-02-04	35.97
128	2021-02-05	36.01
129	2021-02-06	34.94
130	2021-02-07	36.36
131	2021-02-08	33.08
132	2021-02-09	35.13
133	2021-02-10	35.25
134	2021-02-11	33.88
135	2021-02-12	34.54
136	2021-02-13	33.67
137	2021-02-14	33.91
138	2021-02-15	32.92
139	2021-02-16	32.77
140	2021-02-17	35.02
141	2021-02-18	33.71
142	2021-02-19	34.66
143	2021-02-20	33.94
144	2021-02-21	33.63

	Time	CEMS_27-PM_U
SI No.		
145	2021-02-22	33.11
146	2021-02-23	33.34
147	2021-02-24	32.58
148	2021-02-25	32.79
149	2021-02-26	32.12
150	2021-02-27	30.74
151	2021-02-28	30.72
152	2021-03-01	31.15
153	2021-03-02	33.73
154	2021-03-03	31.73
155	2021-03-04	33.28
156	2021-03-05	33.28
157	2021-03-06	33.09
158	2021-03-07	32.00
159	2021-03-08	34.03
160	2021-03-09	42.19
161	2021-03-10	32.06
162	2021-03-11	33.67
163	2021-03-12	32.89
164	2021-03-13	33.10
165	2021-03-14	32.03
166	2021-03-15	31.92
167	2021-03-16	30.83
168	2021-03-17	31.59
169	2021-03-18	30.81
170	2021-03-19	30.17

	Time	CEMS_27-PM_U
SI No.		
171	2021-03-20	32.58
172	2021-03-21	NA
173	2021-03-22	27.67
174	2021-03-23	32.35
175	2021-03-24	31.61
176	2021-03-25	29.19
177	2021-03-26	30.45
178	2021-03-27	31.60
179	2021-03-28	31.58
180	2021-03-29	30.90
181	2021-03-30	30.13
182	2021-03-31	30.19

**Report Details:** JSPLAngul | 2021-05-25 14:35:26 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
Prescribed Standards	0 - 100	0 - 100	0 - 100
Maximum Data	348.49	264.46	27.86
Minimum Data	84.29	37.62	15.02
Geometric Mean	199.04	101.9	20.6
Median	150.56	79.8	20.22
Standard Deviation	82.47	62.85	2.05
Maximum Value At Time	2020-12-15	2020-11-28	2021-03-12
Minimum Value At Time	2020-10-08	2020-10-04	2020-10-15
Valid Data Points	179	179	179
Total Data Points	182	182	182
Data Availability %	98.35%	98.35%	98.35%

	Time	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
SI No.				
1	2020-10-01	105.26	43.51	26.51
2	2020-10-02	105.84	44.68	25.06
3	2020-10-03	105.76	43.56	25.91
4	2020-10-04	104.52	37.62	25.68
5	2020-10-05	105.18	40.47	25.59
6	2020-10-06	105.66	45.59	24.69
7	2020-10-07	105.65	51.71	24.69
8	2020-10-08	84.29	38.35	19.86
9	2020-10-09	105.29	46.02	24.71
10	2020-10-10	105.44	45.63	25.01
11	2020-10-11	105.80	46.23	25.96
12	2020-10-12	106.30	45.36	25.47
13	2020-10-13	106.72	47.52	24.89
14	2020-10-14	107.07	47.69	21.36

	Time	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
SI No.				
15	2020-10-15	107.26	49.29	15.02
16	2020-10-16	198.56	68.52	17.28
17	2020-10-17	278.24	84.38	17.04
18	2020-10-18	279.10	81.73	17.09
19	2020-10-19	280.49	82.03	19.81
20	2020-10-20	281.61	81.83	21.44
21	2020-10-21	279.13	81.51	23.24
22	2020-10-22	280.49	82.72	23.96
23	2020-10-23	281.51	82.99	22.97
24	2020-10-24	282.80	82.35	20.78
25	2020-10-25	283.98	84.64	20.71
26	2020-10-26	284.97	90.09	20.32
27	2020-10-27	285.99	93.35	19.97
28	2020-10-28	286.26	80.93	19.98
29	2020-10-29	287.52	90.84	19.98
30	2020-10-30	290.23	95.62	20.46
31	2020-10-31	291.31	133.88	19.79
32	2020-11-01	290.22	172.18	19.57
33	2020-11-02	294.08	156.92	19.36
34	2020-11-03	296.04	151.62	19.36
35	2020-11-04	297.84	141.50	20.07
36	2020-11-05	300.06	160.68	20.73
37	2020-11-06	301.70	167.01	20.41
38	2020-11-07	302.98	172.90	20.85
39	2020-11-08	303.93	179.30	21.15
40	2020-11-09	304.89	189.88	20.83

	Time	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
SI No.				
41	2020-11-10	306.34	173.27	20.21
42	2020-11-11	307.76	167.27	19.60
43	2020-11-12	309.11	165.41	20.49
44	2020-11-13	311.37	154.00	19.95
45	2020-11-14	312.35	178.90	20.24
46	2020-11-15	312.59	182.60	20.79
47	2020-11-16	313.20	198.70	20.47
48	2020-11-17	313.90	195.37	20.03
49	2020-11-18	314.56	200.71	20.99
50	2020-11-19	315.47	196.64	19.92
51	2020-11-20	316.48	182.47	19.74
52	2020-11-21	318.53	198.32	20.12
53	2020-11-22	320.77	209.59	20.40
54	2020-11-23	322.07	201.32	21.01
55	2020-11-24	322.64	202.66	20.03
56	2020-11-25	323.59	220.15	20.19
57	2020-11-26	324.25	243.82	20.16
58	2020-11-27	324.99	247.01	20.23
59	2020-11-28	326.23	264.46	20.37
60	2020-11-29	328.49	241.83	20.01
61	2020-11-30	329.62	225.31	19.74
62	2020-12-01	330.17	227.85	20.39
63	2020-12-02	331.34	234.69	20.22
64	2020-12-03	332.64	239.48	20.14
65	2020-12-04	334.15	227.76	20.18
66	2020-12-05	335.21	214.86	20.07

	Time	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
SI No.				
67	2020-12-06	336.51	234.76	20.10
68	2020-12-07	337.59	236.48	19.84
69	2020-12-08	338.14	221.09	19.54
70	2020-12-09	338.59	237.29	19.78
71	2020-12-10	340.19	222.78	19.28
72	2020-12-11	341.48	239.55	19.99
73	2020-12-12	343.60	201.01	20.13
74	2020-12-13	344.75	207.77	19.75
75	2020-12-14	347.16	225.89	19.87
76	2020-12-15	348.49	213.79	19.56
77	2020-12-16	234.97	139.23	19.48
78	2020-12-17	133.16	78.85	19.93
79	2020-12-18	133.72	77.22	20.43
80	2020-12-19	134.08	72.17	20.26
81	2020-12-20	134.67	73.03	20.10
82	2020-12-21	135.08	82.08	19.88
83	2020-12-22	135.24	86.04	20.42
84	2020-12-23	135.50	87.53	19.95
85	2020-12-24	135.60	92.29	20.02
86	2020-12-25	135.87	89.53	20.01
87	2020-12-26	136.08	88.65	20.83
88	2020-12-27	136.38	90.55	20.76
89	2020-12-28	137.04	79.44	21.09
90	2020-12-29	137.56	85.90	20.89
91	2020-12-30	138.05	94.56	21.13
92	2020-12-31	138.26	88.81	20.68



	Time	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
SI No.				
93	2021-01-01	138.52	93.81	20.36
94	2021-01-02	138.93	86.19	20.67
95	2021-01-03	139.29	87.93	20.28
96	2021-01-04	139.69	86.34	20.37
97	2021-01-05	140.36	79.93	20.65
98	2021-01-06	140.41	69.63	21.84
99	2021-01-07	140.67	87.76	19.59
100	2021-01-08	141.09	84.14	19.74
101	2021-01-09	141.53	78.71	20.70
102	2021-01-10	142.18	71.95	20.20
103	2021-01-11	142.64	74.37	19.69
104	2021-01-12	NA	NA	NA
105	2021-01-13	NA	NA	NA
106	2021-01-14	143.92	73.13	19.83
107	2021-01-15	143.57	76.05	19.65
108	2021-01-16	143.37	91.48	20.18
109	2021-01-17	142.99	77.82	20.40
110	2021-01-18	142.83	81.97	20.27
111	2021-01-19	142.96	86.92	20.66
112	2021-01-20	129.65	84.61	20.24
113	2021-01-21	145.29	81.51	20.79
114	2021-01-22	145.71	76.28	20.51
115	2021-01-23	145.84	78.11	20.55
116	2021-01-24	146.08	75.49	20.55
117	2021-01-25	146.61	86.27	19.69
118	2021-01-26	147.72	78.21	20.18

	Time	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
SI No.				
119	2021-01-27	148.03	77.28	20.44
120	2021-01-28	148.25	72.12	20.48
121	2021-01-29	148.77	57.37	20.56
122	2021-01-30	148.41	68.94	20.69
123	2021-01-31	148.54	72.46	19.97
124	2021-02-01	148.56	78.53	20.01
125	2021-02-02	148.91	84.80	18.88
126	2021-02-03	149.27	80.57	19.66
127	2021-02-04	148.67	89.94	19.26
128	2021-02-05	148.84	83.42	19.46
129	2021-02-06	149.13	79.80	18.84
130	2021-02-07	149.33	89.17	19.14
131	2021-02-08	149.28	78.93	17.03
132	2021-02-09	149.21	78.06	18.19
133	2021-02-10	149.35	79.21	20.56
134	2021-02-11	149.45	72.82	19.63
135	2021-02-12	149.66	64.99	20.59
136	2021-02-13	150.20	60.42	19.97
137	2021-02-14	150.56	57.08	19.92
138	2021-02-15	150.95	62.00	17.67
139	2021-02-16	151.96	52.11	18.73
140	2021-02-17	153.66	65.55	17.31
141	2021-02-18	153.18	62.16	19.81
142	2021-02-19	152.75	64.81	17.49
143	2021-02-20	152.64	64.46	18.09
144	2021-02-21	152.52	59.95	18.71

	Time	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
SI No.				
145	2021-02-22	152.44	58.74	16.65
146	2021-02-23	152.30	58.21	19.01
147	2021-02-24	152.44	58.19	17.71
148	2021-02-25	152.57	57.10	18.38
149	2021-02-26	152.49	56.54	17.98
150	2021-02-27	152.92	53.11	18.28
151	2021-02-28	153.86	48.98	16.41
152	2021-03-01	153.21	49.99	18.11
153	2021-03-02	152.05	52.73	19.87
154	2021-03-03	151.81	55.13	19.53
155	2021-03-04	150.84	65.30	19.31
156	2021-03-05	150.01	61.33	21.74
157	2021-03-06	149.47	59.42	19.66
158	2021-03-07	149.25	65.48	20.67
159	2021-03-08	148.22	61.37	21.88
160	2021-03-09	148.42	42.00	22.83
161	2021-03-10	148.02	48.30	26.47
162	2021-03-11	148.49	42.25	24.59
163	2021-03-12	148.35	43.62	27.86
164	2021-03-13	148.60	45.50	24.94
165	2021-03-14	148.50	46.71	24.60
166	2021-03-15	148.73	42.93	26.27
167	2021-03-16	148.92	45.79	23.13
168	2021-03-17	149.34	45.38	21.72
169	2021-03-18	149.78	43.62	20.61
170	2021-03-19	150.04	47.72	20.15

	Time	CEMS_36-SO2_U	CEMS_36-NOx_U	CEMS_36-PM_U
SI No.				
171	2021-03-20	149.99	49.09	20.58
172	2021-03-21	NA	NA	NA
173	2021-03-22	150.49	44.52	18.71
174	2021-03-23	150.88	41.56	21.46
175	2021-03-24	151.37	41.78	21.31
176	2021-03-25	151.64	44.66	21.66
177	2021-03-26	151.99	43.82	21.71
178	2021-03-27	152.00	39.77	21.46
179	2021-03-28	151.59	39.27	21.02
180	2021-03-29	152.46	41.26	22.58
181	2021-03-30	153.44	42.46	21.82
182	2021-03-31	153.97	48.07	21.38

Report Details: JSPLAngul | 2021-05-25 14:37:14 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_26-PM_U
Prescribed Standards	0 - 100
Maximum Data	43.2
Minimum Data	15.35
Geometric Mean	28.12
Median	26.72
Standard Deviation	7.14
Maximum Value At Time	2020-11-25
Minimum Value At Time	2021-03-09
Valid Data Points	179
Total Data Points	182
Data Availability %	98.35%

	Time	CEMS_26-PM_U
Sl No.		
1	2020-10-01	23.87
2	2020-10-02	24.02
3	2020-10-03	26.43
4	2020-10-04	27.12
5	2020-10-05	25.58
6	2020-10-06	25.11
7	2020-10-07	24.68
8	2020-10-08	23.86
9	2020-10-09	23.75
10	2020-10-10	25.61
11	2020-10-11	26.75
12	2020-10-12	25.82
13	2020-10-13	26.72
14	2020-10-14	29.29

	Time	CEMS_26-PM_U
SI No.		
15	2020-10-15	33.57
16	2020-10-16	36.30
17	2020-10-17	39.47
18	2020-10-18	36.67
19	2020-10-19	34.13
20	2020-10-20	36.70
21	2020-10-21	34.22
22	2020-10-22	34.06
23	2020-10-23	35.55
24	2020-10-24	36.74
25	2020-10-25	35.42
26	2020-10-26	35.38
27	2020-10-27	33.38
28	2020-10-28	32.88
29	2020-10-29	32.64
30	2020-10-30	31.22
31	2020-10-31	31.39
32	2020-11-01	31.44
33	2020-11-02	31.88
34	2020-11-03	33.76
35	2020-11-04	33.51
36	2020-11-05	33.89
37	2020-11-06	34.20
38	2020-11-07	36.14
39	2020-11-08	37.43
40	2020-11-09	41.63

	Time	CEMS_26-PM_U
SI No.		
41	2020-11-10	42.02
42	2020-11-11	40.24
43	2020-11-12	39.82
44	2020-11-13	41.88
45	2020-11-14	35.71
46	2020-11-15	35.37
47	2020-11-16	35.91
48	2020-11-17	37.50
49	2020-11-18	36.27
50	2020-11-19	35.64
51	2020-11-20	34.47
52	2020-11-21	34.24
53	2020-11-22	33.41
54	2020-11-23	35.57
55	2020-11-24	38.78
56	2020-11-25	43.20
57	2020-11-26	36.66
58	2020-11-27	36.21
59	2020-11-28	35.59
60	2020-11-29	33.58
61	2020-11-30	33.26
62	2020-12-01	38.49
63	2020-12-02	39.18
64	2020-12-03	37.33
65	2020-12-04	37.58
66	2020-12-05	37.83



	Time	CEMS_26-PM_U
SI No.		
67	2020-12-06	35.97
68	2020-12-07	34.12
69	2020-12-08	33.97
70	2020-12-09	33.60
71	2020-12-10	35.21
72	2020-12-11	34.59
73	2020-12-12	34.53
74	2020-12-13	34.78
75	2020-12-14	34.72
76	2020-12-15	35.09
77	2020-12-16	36.05
78	2020-12-17	35.64
79	2020-12-18	38.83
80	2020-12-19	42.54
81	2020-12-20	42.36
82	2020-12-21	42.13
83	2020-12-22	38.01
84	2020-12-23	26.81
85	2020-12-24	18.39
86	2020-12-25	18.06
87	2020-12-26	19.04
88	2020-12-27	18.83
89	2020-12-28	18.33
90	2020-12-29	17.72
91	2020-12-30	18.52
92	2020-12-31	19.33

	Time	CEMS_26-PM_U
SI No.		
93	2021-01-01	19.26
94	2021-01-02	20.37
95	2021-01-03	20.33
96	2021-01-04	21.08
97	2021-01-05	19.79
98	2021-01-06	19.09
99	2021-01-07	19.95
100	2021-01-08	21.02
101	2021-01-09	19.94
102	2021-01-10	21.09
103	2021-01-11	20.72
104	2021-01-12	NA
105	2021-01-13	NA
106	2021-01-14	22.48
107	2021-01-15	22.97
108	2021-01-16	22.97
109	2021-01-17	21.32
110	2021-01-18	20.73
111	2021-01-19	19.70
112	2021-01-20	19.81
113	2021-01-21	21.92
114	2021-01-22	24.57
115	2021-01-23	22.46
116	2021-01-24	21.30
117	2021-01-25	20.68
118	2021-01-26	20.75

	Time	CEMS_26-PM_U
SI No.		
119	2021-01-27	21.48
120	2021-01-28	22.37
121	2021-01-29	23.16
122	2021-01-30	21.61
123	2021-01-31	23.93
124	2021-02-01	23.37
125	2021-02-02	22.73
126	2021-02-03	23.21
127	2021-02-04	22.69
128	2021-02-05	22.61
129	2021-02-06	22.56
130	2021-02-07	24.63
131	2021-02-08	20.00
132	2021-02-09	22.30
133	2021-02-10	22.64
134	2021-02-11	20.57
135	2021-02-12	21.13
136	2021-02-13	19.47
137	2021-02-14	20.38
138	2021-02-15	21.30
139	2021-02-16	20.11
140	2021-02-17	20.86
141	2021-02-18	20.45
142	2021-02-19	20.87
143	2021-02-20	21.93
144	2021-02-21	23.25

	Time	CEMS_26-PM_U
SI No.		
145	2021-02-22	21.08
146	2021-02-23	21.70
147	2021-02-24	21.56
148	2021-02-25	23.14
149	2021-02-26	22.85
150	2021-02-27	21.77
151	2021-02-28	23.46
152	2021-03-01	23.07
153	2021-03-02	23.79
154	2021-03-03	21.56
155	2021-03-04	20.96
156	2021-03-05	21.46
157	2021-03-06	22.30
158	2021-03-07	21.07
159	2021-03-08	20.04
160	2021-03-09	15.35
161	2021-03-10	20.56
162	2021-03-11	25.40
163	2021-03-12	20.25
164	2021-03-13	30.03
165	2021-03-14	27.89
166	2021-03-15	24.09
167	2021-03-16	28.30
168	2021-03-17	29.21
169	2021-03-18	29.37
170	2021-03-19	28.96

	Time	CEMS_26-PM_U
SI No.		
171	2021-03-20	27.23
172	2021-03-21	NA
173	2021-03-22	25.62
174	2021-03-23	28.35
175	2021-03-24	31.36
176	2021-03-25	29.31
177	2021-03-26	29.66
178	2021-03-27	30.89
179	2021-03-28	31.32
180	2021-03-29	29.71
181	2021-03-30	30.65
182	2021-03-31	30.43

**Report Details:** JSPLAngul | 2021-05-25 14:34:39 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
Prescribed Standards	0 - 100	0 -	0 -
Maximum Data	39.89	81.71	136.02
Minimum Data	17.61	0.0	23.41
Geometric Mean	20.66	38.43	75.67
Median	19.65	43.76	80.72
Standard Deviation	3.27	28.68	26.86
Maximum Value At Time	2021-03-09	2021-03-20	2020-10-09
Minimum Value At Time	2021-03-29	2021-03-30	2021-03-12
Valid Data Points	179	179	179
Total Data Points	182	182	182
Data Availability %	98.35%	98.35%	98.35%

	Time	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
SI No.				
1	2020-10-01	24.63	64.38	121.42
2	2020-10-02	25.04	62.45	121.55
3	2020-10-03	26.29	58.09	121.03
4	2020-10-04	26.37	60.15	126.17
5	2020-10-05	26.15	62.16	131.46
6	2020-10-06	26.47	58.69	128.51
7	2020-10-07	25.40	64.29	130.03
8	2020-10-08	20.49	51.72	102.01
9	2020-10-09	24.30	67.65	136.02
10	2020-10-10	26.41	60.47	125.63
11	2020-10-11	24.74	53.91	124.85
12	2020-10-12	24.25	47.33	128.04
13	2020-10-13	25.53	50.04	121.17
14	2020-10-14	26.25	47.27	111.47

	Time	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
SI No.				
15	2020-10-15	26.40	42.99	113.24
16	2020-10-16	25.97	29.76	114.51
17	2020-10-17	25.03	40.60	102.26
18	2020-10-18	24.66	40.33	99.16
19	2020-10-19	39.42	21.53	93.32
20	2020-10-20	24.48	40.01	94.32
21	2020-10-21	30.11	39.15	97.06
22	2020-10-22	26.54	31.57	94.75
23	2020-10-23	23.87	28.97	99.85
24	2020-10-24	24.52	37.08	100.51
25	2020-10-25	23.68	32.44	102.97
26	2020-10-26	23.00	40.01	100.37
27	2020-10-27	21.71	38.20	98.33
28	2020-10-28	21.15	45.41	96.92
29	2020-10-29	19.85	45.59	97.33
30	2020-10-30	19.65	50.98	95.38
31	2020-10-31	19.84	63.38	95.37
32	2020-11-01	19.21	73.73	98.05
33	2020-11-02	19.83	70.75	99.71
34	2020-11-03	20.63	62.15	99.04
35	2020-11-04	21.03	50.76	97.78
36	2020-11-05	21.38	65.42	97.85
37	2020-11-06	20.95	65.21	95.55
38	2020-11-07	19.91	65.19	91.57
39	2020-11-08	19.96	67.77	87.84
40	2020-11-09	20.04	75.23	90.54

	Time	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
SI No.				
41	2020-11-10	20.44	67.66	95.50
42	2020-11-11	20.04	61.34	97.94
43	2020-11-12	19.90	61.79	99.59
44	2020-11-13	19.22	57.72	101.63
45	2020-11-14	19.65	26.24	101.17
46	2020-11-15	19.58	49.27	99.84
47	2020-11-16	19.98	70.17	99.56
48	2020-11-17	19.63	70.15	100.84
49	2020-11-18	18.87	70.21	103.46
50	2020-11-19	19.11	62.58	101.09
51	2020-11-20	18.74	70.19	100.82
52	2020-11-21	19.19	70.28	98.60
53	2020-11-22	19.76	70.21	93.43
54	2020-11-23	19.55	70.12	87.02
55	2020-11-24	19.49	70.08	86.57
56	2020-11-25	19.46	70.09	85.51
57	2020-11-26	19.67	70.24	77.13
58	2020-11-27	19.21	70.19	89.04
59	2020-11-28	18.74	70.20	91.38
60	2020-11-29	19.13	70.32	89.44
61	2020-11-30	18.68	70.28	87.01
62	2020-12-01	18.94	70.26	86.57
63	2020-12-02	19.17	70.25	84.93
64	2020-12-03	19.01	70.22	84.06
65	2020-12-04	19.38	70.19	84.94
66	2020-12-05	19.51	70.23	87.49



	Time	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
SI No.				
67	2020-12-06	19.67	70.22	86.67
68	2020-12-07	19.05	70.08	88.89
69	2020-12-08	18.81	70.07	90.20
70	2020-12-09	18.90	70.07	88.44
71	2020-12-10	18.70	70.37	87.96
72	2020-12-11	18.60	70.13	86.23
73	2020-12-12	18.57	70.18	89.15
74	2020-12-13	18.85	70.19	85.56
75	2020-12-14	18.72	70.15	89.50
76	2020-12-15	19.23	70.16	86.05
77	2020-12-16	18.83	32.57	78.88
78	2020-12-17	18.86	0.03	77.24
79	2020-12-18	18.86	0.07	80.72
80	2020-12-19	19.27	0.06	74.03
81	2020-12-20	19.15	0.27	71.50
82	2020-12-21	18.99	0.45	73.35
83	2020-12-22	18.85	0.32	73.07
84	2020-12-23	19.32	0.25	72.95
85	2020-12-24	19.45	0.16	73.87
86	2020-12-25	19.38	0.17	74.94
87	2020-12-26	19.76	2.48	75.43
88	2020-12-27	19.54	5.42	75.37
89	2020-12-28	19.55	6.76	74.10
90	2020-12-29	19.94	5.63	75.17
91	2020-12-30	20.13	5.99	75.58
92	2020-12-31	20.05	5.73	74.15

	Time	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
SI No.				
93	2021-01-01	19.95	5.43	74.64
94	2021-01-02	19.96	4.69	75.06
95	2021-01-03	19.91	4.83	76.26
96	2021-01-04	20.06	5.18	74.39
97	2021-01-05	19.96	5.81	79.78
98	2021-01-06	20.04	7.13	77.69
99	2021-01-07	19.69	5.64	84.35
100	2021-01-08	19.88	5.35	85.35
101	2021-01-09	19.84	5.02	87.37
102	2021-01-10	19.57	5.21	88.59
103	2021-01-11	19.01	5.60	88.48
104	2021-01-12	NA	NA	NA
105	2021-01-13	NA	NA	NA
106	2021-01-14	19.16	5.72	87.14
107	2021-01-15	19.90	4.87	75.85
108	2021-01-16	19.32	5.05	80.94
109	2021-01-17	20.20	5.00	78.87
110	2021-01-18	20.10	5.96	53.49
111	2021-01-19	19.51	5.50	33.94
112	2021-01-20	19.55	6.27	28.28
113	2021-01-21	19.29	5.11	31.37
114	2021-01-22	19.68	4.62	33.49
115	2021-01-23	19.88	5.17	32.99
116	2021-01-24	19.76	4.59	36.77
117	2021-01-25	19.96	5.95	35.57
118	2021-01-26	20.10	5.66	38.65

	Time	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
SI No.				
119	2021-01-27	20.21	5.74	39.58
120	2021-01-28	20.11	5.62	41.46
121	2021-01-29	20.57	5.63	42.09
122	2021-01-30	19.97	4.21	38.24
123	2021-01-31	19.66	5.72	39.36
124	2021-02-01	19.96	4.57	37.99
125	2021-02-02	19.69	5.59	38.90
126	2021-02-03	19.99	6.72	34.25
127	2021-02-04	19.59	6.59	40.35
128	2021-02-05	19.50	5.39	46.83
129	2021-02-06	19.80	4.80	41.91
130	2021-02-07	20.81	6.88	48.36
131	2021-02-08	18.98	4.62	38.86
132	2021-02-09	19.82	5.03	29.80
133	2021-02-10	19.76	5.97	42.64
134	2021-02-11	19.88	5.31	44.17
135	2021-02-12	19.69	4.57	39.53
136	2021-02-13	19.39	4.71	37.18
137	2021-02-14	19.19	7.30	32.97
138	2021-02-15	19.48	7.77	39.58
139	2021-02-16	19.47	5.50	45.22
140	2021-02-17	18.57	6.07	44.07
141	2021-02-18	18.34	4.81	46.10
142	2021-02-19	18.42	4.86	42.01
143	2021-02-20	18.55	7.26	44.22
144	2021-02-21	18.50	8.83	46.60

	Time	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
SI No.				
145	2021-02-22	18.79	43.76	45.57
146	2021-02-23	18.72	75.20	46.17
147	2021-02-24	18.92	70.24	49.89
148	2021-02-25	18.76	68.90	48.83
149	2021-02-26	18.54	60.02	47.08
150	2021-02-27	18.83	58.46	50.20
151	2021-02-28	18.28	67.35	49.20
152	2021-03-01	18.53	67.69	49.69
153	2021-03-02	19.05	58.67	49.73
154	2021-03-03	19.50	61.54	50.36
155	2021-03-04	19.20	63.59	54.87
156	2021-03-05	19.47	59.83	52.82
157	2021-03-06	19.79	69.30	53.64
158	2021-03-07	20.14	75.85	53.82
159	2021-03-08	19.44	70.73	55.93
160	2021-03-09	39.89	28.51	38.12
161	2021-03-10	21.75	64.78	59.01
162	2021-03-11	27.18	30.95	56.43
163	2021-03-12	33.13	8.00	23.41
164	2021-03-13	20.51	68.33	40.91
165	2021-03-14	18.73	45.36	47.17
166	2021-03-15	30.63	42.58	54.61
167	2021-03-16	18.72	41.38	60.43
168	2021-03-17	19.37	36.32	67.59
169	2021-03-18	18.76	35.26	58.68
170	2021-03-19	18.72	71.31	71.65

	Time	CEMS_25-PM_U	CEMS_25-NOx_U	CEMS_25-SO2_U
SI No.				
171	2021-03-20	19.19	81.71	78.06
172	2021-03-21	NA	NA	NA
173	2021-03-22	19.19	55.85	87.27
174	2021-03-23	19.37	58.62	82.36
175	2021-03-24	18.44	63.37	77.51
176	2021-03-25	18.26	50.30	85.79
177	2021-03-26	17.97	65.04	94.24
178	2021-03-27	18.29	73.74	95.75
179	2021-03-28	18.19	71.39	90.57
180	2021-03-29	17.61	73.51	83.93
181	2021-03-30	18.56	0.00	27.82
182	2021-03-31	18.57	0.50	28.08

Report Details: JSPLAngul | 2021-05-25 14:33:51 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_34-PM_U
Prescribed Standards	0 - 100
Maximum Data	24.2
Minimum Data	3.49
Geometric Mean	17.34
Median	18.62
Standard Deviation	4.3
Maximum Value At Time	2021-02-07
Minimum Value At Time	2020-10-21
Valid Data Points	174
Total Data Points	182
Data Availability %	95.6%

	Time	CEMS_34-PM_U
Sl No.		
1	2020-10-01	5.95
2	2020-10-02	6.09
3	2020-10-03	5.99
4	2020-10-04	6.11
5	2020-10-05	6.31
6	2020-10-06	6.32
7	2020-10-07	6.65
8	2020-10-08	6.70
9	2020-10-09	6.78
10	2020-10-10	6.45
11	2020-10-11	6.32
12	2020-10-12	6.38
13	2020-10-13	6.17
14	2020-10-14	6.22

	Time	CEMS_34-PM_U
SI No.		
15	2020-10-15	10.04
16	2020-10-16	17.89
17	2020-10-17	18.08
18	2020-10-18	13.29
19	2020-10-19	9.74
20	2020-10-20	6.66
21	2020-10-21	3.49
22	2020-10-22	9.27
23	2020-10-23	11.03
24	2020-10-24	16.07
25	2020-10-25	15.56
26	2020-10-26	15.73
27	2020-10-27	16.06
28	2020-10-28	16.44
29	2020-10-29	16.04
30	2020-10-30	16.19
31	2020-10-31	16.17
32	2020-11-01	16.30
33	2020-11-02	15.50
34	2020-11-03	16.05
35	2020-11-04	16.68
36	2020-11-05	16.68
37	2020-11-06	16.61
38	2020-11-07	16.60
39	2020-11-08	16.33
40	2020-11-09	16.54

	Time	CEMS_34-PM_U
SI No.		
41	2020-11-10	16.64
42	2020-11-11	16.21
43	2020-11-12	16.50
44	2020-11-13	17.24
45	2020-11-14	16.97
46	2020-11-15	16.79
47	2020-11-16	16.46
48	2020-11-17	16.41
49	2020-11-18	15.05
50	2020-11-19	16.79
51	2020-11-20	16.44
52	2020-11-21	16.51
53	2020-11-22	16.99
54	2020-11-23	16.93
55	2020-11-24	16.26
56	2020-11-25	16.79
57	2020-11-26	16.71
58	2020-11-27	16.40
59	2020-11-28	16.22
60	2020-11-29	16.53
61	2020-11-30	16.27
62	2020-12-01	16.18
63	2020-12-02	15.97
64	2020-12-03	15.94
65	2020-12-04	16.20
66	2020-12-05	16.32



	Time	CEMS_34-PM_U
SI No.		
67	2020-12-06	16.22
68	2020-12-07	16.52
69	2020-12-08	16.48
70	2020-12-09	17.38
71	2020-12-10	16.85
72	2020-12-11	16.48
73	2020-12-12	16.48
74	2020-12-13	16.55
75	2020-12-14	16.57
76	2020-12-15	16.79
77	2020-12-16	15.81
78	2020-12-17	16.48
79	2020-12-18	19.73
80	2020-12-19	19.49
81	2020-12-20	19.29
82	2020-12-21	18.63
83	2020-12-22	NA
84	2020-12-23	NA
85	2020-12-24	19.84
86	2020-12-25	19.89
87	2020-12-26	20.01
88	2020-12-27	20.19
89	2020-12-28	19.79
90	2020-12-29	17.76
91	2020-12-30	18.71
92	2020-12-31	20.41

	Time	CEMS_34-PM_U
SI No.		
93	2021-01-01	20.64
94	2021-01-02	20.38
95	2021-01-03	19.52
96	2021-01-04	NA
97	2021-01-05	NA
98	2021-01-06	NA
99	2021-01-07	NA
100	2021-01-08	19.44
101	2021-01-09	NA
102	2021-01-10	NA
103	2021-01-11	19.29
104	2021-01-12	17.83
105	2021-01-13	11.55
106	2021-01-14	19.05
107	2021-01-15	20.51
108	2021-01-16	20.37
109	2021-01-17	19.70
110	2021-01-18	19.59
111	2021-01-19	21.04
112	2021-01-20	19.48
113	2021-01-21	20.10
114	2021-01-22	19.18
115	2021-01-23	20.09
116	2021-01-24	20.45
117	2021-01-25	20.34
118	2021-01-26	19.71

	Time	CEMS_34-PM_U
SI No.		
119	2021-01-27	20.11
120	2021-01-28	21.77
121	2021-01-29	22.27
122	2021-01-30	20.83
123	2021-01-31	21.41
124	2021-02-01	20.17
125	2021-02-02	21.84
126	2021-02-03	21.92
127	2021-02-04	20.49
128	2021-02-05	21.30
129	2021-02-06	20.30
130	2021-02-07	24.20
131	2021-02-08	20.98
132	2021-02-09	19.79
133	2021-02-10	19.82
134	2021-02-11	18.15
135	2021-02-12	18.87
136	2021-02-13	19.02
137	2021-02-14	19.94
138	2021-02-15	20.79
139	2021-02-16	18.97
140	2021-02-17	19.79
141	2021-02-18	19.44
142	2021-02-19	19.59
143	2021-02-20	20.67
144	2021-02-21	20.36

	Time	CEMS_34-PM_U
SI No.		
145	2021-02-22	21.13
146	2021-02-23	20.50
147	2021-02-24	20.49
148	2021-02-25	21.25
149	2021-02-26	21.29
150	2021-02-27	19.87
151	2021-02-28	20.81
152	2021-03-01	20.83
153	2021-03-02	20.48
154	2021-03-03	21.11
155	2021-03-04	19.41
156	2021-03-05	20.85
157	2021-03-06	21.42
158	2021-03-07	21.33
159	2021-03-08	20.45
160	2021-03-09	18.42
161	2021-03-10	18.62
162	2021-03-11	18.27
163	2021-03-12	16.86
164	2021-03-13	18.99
165	2021-03-14	19.58
166	2021-03-15	18.20
167	2021-03-16	20.24
168	2021-03-17	20.28
169	2021-03-18	20.97
170	2021-03-19	20.73

	Time	CEMS_34-PM_U
SI No.		
171	2021-03-20	21.38
172	2021-03-21	20.82
173	2021-03-22	20.85
174	2021-03-23	20.79
175	2021-03-24	20.90
176	2021-03-25	21.05
177	2021-03-26	21.27
178	2021-03-27	21.55
179	2021-03-28	20.59
180	2021-03-29	20.09
181	2021-03-30	21.06
182	2021-03-31	20.07

**Report Details:** JSPLAngul | 2021-05-25 14:43:09 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_33-PM_U
Prescribed Standards	0 - 100
Maximum Data	40.54
Minimum Data	10.91
Geometric Mean	27.39
Median	24.87
Standard Deviation	9.23
Maximum Value At Time	2020-11-05
Minimum Value At Time	2021-01-25
Valid Data Points	171
Total Data Points	182
Data Availability %	93.96%

	Time	CEMS_33-PM_U
Sl No.		
1	2020-10-01	15.73
2	2020-10-02	15.82
3	2020-10-03	17.58
4	2020-10-04	17.79
5	2020-10-05	18.46
6	2020-10-06	18.85
7	2020-10-07	18.44
8	2020-10-08	18.16
9	2020-10-09	18.45
10	2020-10-10	18.48
11	2020-10-11	17.96
12	2020-10-12	18.48
13	2020-10-13	18.12
14	2020-10-14	17.41

	Time	CEMS_33-PM_U
SI No.		
15	2020-10-15	19.32
16	2020-10-16	25.00
17	2020-10-17	25.83
18	2020-10-18	31.62
19	2020-10-19	35.44
20	2020-10-20	35.81
21	2020-10-21	35.92
22	2020-10-22	35.40
23	2020-10-23	35.64
24	2020-10-24	36.96
25	2020-10-25	38.17
26	2020-10-26	37.89
27	2020-10-27	37.68
28	2020-10-28	38.32
29	2020-10-29	38.90
30	2020-10-30	38.74
31	2020-10-31	37.86
32	2020-11-01	39.97
33	2020-11-02	39.39
34	2020-11-03	40.34
35	2020-11-04	39.99
36	2020-11-05	40.54
37	2020-11-06	40.12
38	2020-11-07	39.55
39	2020-11-08	39.27
40	2020-11-09	39.36

	Time	CEMS_33-PM_U
SI No.		
41	2020-11-10	38.92
42	2020-11-11	39.25
43	2020-11-12	39.47
44	2020-11-13	40.41
45	2020-11-14	39.89
46	2020-11-15	39.54
47	2020-11-16	40.11
48	2020-11-17	40.34
49	2020-11-18	39.45
50	2020-11-19	39.85
51	2020-11-20	39.97
52	2020-11-21	39.84
53	2020-11-22	39.31
54	2020-11-23	38.42
55	2020-11-24	37.77
56	2020-11-25	38.65
57	2020-11-26	37.62
58	2020-11-27	38.22
59	2020-11-28	39.03
60	2020-11-29	39.77
61	2020-11-30	39.59
62	2020-12-01	38.69
63	2020-12-02	40.12
64	2020-12-03	39.83
65	2020-12-04	39.01
66	2020-12-05	39.16



	Time	CEMS_33-PM_U
SI No.		
67	2020-12-06	38.81
68	2020-12-07	38.33
69	2020-12-08	38.62
70	2020-12-09	38.00
71	2020-12-10	38.07
72	2020-12-11	38.10
73	2020-12-12	38.16
74	2020-12-13	38.15
75	2020-12-14	39.24
76	2020-12-15	39.15
77	2020-12-16	38.38
78	2020-12-17	33.68
79	2020-12-18	26.22
80	2020-12-19	25.73
81	2020-12-20	25.07
82	2020-12-21	24.61
83	2020-12-22	24.87
84	2020-12-23	24.63
85	2020-12-24	24.84
86	2020-12-25	24.63
87	2020-12-26	24.54
88	2020-12-27	24.61
89	2020-12-28	24.46
90	2020-12-29	24.97
91	2020-12-30	24.53
92	2020-12-31	NA

	Time	CEMS_33-PM_U
SI No.		
93	2021-01-01	NA
94	2021-01-02	NA
95	2021-01-03	NA
96	2021-01-04	NA
97	2021-01-05	NA
98	2021-01-06	NA
99	2021-01-07	NA
100	2021-01-08	25.84
101	2021-01-09	NA
102	2021-01-10	NA
103	2021-01-11	25.50
104	2021-01-12	24.49
105	2021-01-13	23.41
106	2021-01-14	23.95
107	2021-01-15	23.93
108	2021-01-16	24.12
109	2021-01-17	23.28
110	2021-01-18	23.39
111	2021-01-19	27.39
112	2021-01-20	22.96
113	2021-01-21	21.55
114	2021-01-22	21.65
115	2021-01-23	21.05
116	2021-01-24	15.28
117	2021-01-25	10.91
118	2021-01-26	12.05

	Time	CEMS_33-PM_U
SI No.		
119	2021-01-27	17.39
120	2021-01-28	23.15
121	2021-01-29	23.23
122	2021-01-30	22.10
123	2021-01-31	26.79
124	2021-02-01	28.36
125	2021-02-02	21.01
126	2021-02-03	23.06
127	2021-02-04	31.05
128	2021-02-05	28.71
129	2021-02-06	23.01
130	2021-02-07	34.54
131	2021-02-08	30.23
132	2021-02-09	17.45
133	2021-02-10	18.54
134	2021-02-11	14.43
135	2021-02-12	14.33
136	2021-02-13	13.48
137	2021-02-14	15.30
138	2021-02-15	16.36
139	2021-02-16	12.37
140	2021-02-17	17.09
141	2021-02-18	18.06
142	2021-02-19	14.72
143	2021-02-20	16.78
144	2021-02-21	23.53

	Time	CEMS_33-PM_U
SI No.		
145	2021-02-22	24.98
146	2021-02-23	24.74
147	2021-02-24	23.09
148	2021-02-25	25.96
149	2021-02-26	18.34
150	2021-02-27	19.11
151	2021-02-28	17.84
152	2021-03-01	18.58
153	2021-03-02	16.90
154	2021-03-03	18.86
155	2021-03-04	13.24
156	2021-03-05	15.62
157	2021-03-06	13.32
158	2021-03-07	15.32
159	2021-03-08	17.46
160	2021-03-09	18.35
161	2021-03-10	11.47
162	2021-03-11	25.75
163	2021-03-12	21.13
164	2021-03-13	18.94
165	2021-03-14	20.33
166	2021-03-15	15.27
167	2021-03-16	21.27
168	2021-03-17	23.59
169	2021-03-18	21.49
170	2021-03-19	20.12

	Time	CEMS_33-PM_U
SI No.		
171	2021-03-20	28.45
172	2021-03-21	NA
173	2021-03-22	18.93
174	2021-03-23	19.82
175	2021-03-24	18.34
176	2021-03-25	19.70
177	2021-03-26	27.68
178	2021-03-27	27.61
179	2021-03-28	24.50
180	2021-03-29	26.79
181	2021-03-30	30.24
182	2021-03-31	29.38

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# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_13-PM_U
Prescribed Standards	0 - 100
Maximum Data	12.13
Minimum Data	0.0
Geometric Mean	1.5
Median	0.0
Standard Deviation	3.11
Maximum Value At Time	2021-03-13
Minimum Value At Time	2020-10-01
Valid Data Points	104
Total Data Points	182
Data Availability %	57.14%

	Time	CEMS_13-PM_U
Sl No.		
1	2020-10-01	0.00
2	2020-10-02	0.00
3	2020-10-03	0.00
4	2020-10-04	0.00
5	2020-10-05	0.00
6	2020-10-06	0.00
7	2020-10-07	0.00
8	2020-10-08	0.00
9	2020-10-09	0.00
10	2020-10-10	0.00
11	2020-10-11	0.00
12	2020-10-12	0.00
13	2020-10-13	0.00
14	2020-10-14	0.00

	Time	CEMS_13-PM_U
SI No.		
15	2020-10-15	0.00
16	2020-10-16	NA
17	2020-10-17	NA
18	2020-10-18	NA
19	2020-10-19	NA
20	2020-10-20	NA
21	2020-10-21	NA
22	2020-10-22	NA
23	2020-10-23	NA
24	2020-10-24	NA
25	2020-10-25	NA
26	2020-10-26	NA
27	2020-10-27	NA
28	2020-10-28	NA
29	2020-10-29	NA
30	2020-10-30	NA
31	2020-10-31	NA
32	2020-11-01	NA
33	2020-11-02	NA
34	2020-11-03	NA
35	2020-11-04	NA
36	2020-11-05	NA
37	2020-11-06	NA
38	2020-11-07	0.00
39	2020-11-08	0.00
40	2020-11-09	0.01

	Time	CEMS_13-PM_U
SI No.		
41	2020-11-10	0.00
42	2020-11-11	0.00
43	2020-11-12	0.00
44	2020-11-13	0.00
45	2020-11-14	0.00
46	2020-11-15	0.00
47	2020-11-16	0.00
48	2020-11-17	0.00
49	2020-11-18	0.00
50	2020-11-19	0.00
51	2020-11-20	0.00
52	2020-11-21	0.00
53	2020-11-22	0.00
54	2020-11-23	0.00
55	2020-11-24	0.00
56	2020-11-25	0.00
57	2020-11-26	0.00
58	2020-11-27	0.00
59	2020-11-28	0.00
60	2020-11-29	0.00
61	2020-11-30	0.00
62	2020-12-01	0.00
63	2020-12-02	0.00
64	2020-12-03	0.00
65	2020-12-04	0.00
66	2020-12-05	0.00



	Time	CEMS_13-PM_U
SI No.		
67	2020-12-06	0.00
68	2020-12-07	0.00
69	2020-12-08	0.00
70	2020-12-09	0.00
71	2020-12-10	0.00
72	2020-12-11	0.00
73	2020-12-12	0.00
74	2020-12-13	0.00
75	2020-12-14	0.00
76	2020-12-15	0.00
77	2020-12-16	0.00
78	2020-12-17	0.00
79	2020-12-18	0.00
80	2020-12-19	0.00
81	2020-12-20	0.00
82	2020-12-21	0.00
83	2020-12-22	0.00
84	2020-12-23	0.00
85	2020-12-24	0.00
86	2020-12-25	0.00
87	2020-12-26	0.00
88	2020-12-27	0.00
89	2020-12-28	0.00
90	2020-12-29	0.00
91	2020-12-30	0.00
92	2020-12-31	0.00

	Time	CEMS_13-PM_U
SI No.		
93	2021-01-01	0.00
94	2021-01-02	0.00
95	2021-01-03	0.00
96	2021-01-04	0.00
97	2021-01-05	0.00
98	2021-01-06	0.00
99	2021-01-07	0.00
100	2021-01-08	0.00
101	2021-01-09	0.00
102	2021-01-10	NA
103	2021-01-11	NA
104	2021-01-12	NA
105	2021-01-13	NA
106	2021-01-14	NA
107	2021-01-15	NA
108	2021-01-16	NA
109	2021-01-17	NA
110	2021-01-18	NA
111	2021-01-19	NA
112	2021-01-20	NA
113	2021-01-21	NA
114	2021-01-22	NA
115	2021-01-23	NA
116	2021-01-24	NA
117	2021-01-25	NA
118	2021-01-26	NA

	Time	CEMS_13-PM_U
SI No.		
119	2021-01-27	NA
120	2021-01-28	NA
121	2021-01-29	NA
122	2021-01-30	NA
123	2021-01-31	NA
124	2021-02-01	NA
125	2021-02-02	NA
126	2021-02-03	NA
127	2021-02-04	NA
128	2021-02-05	NA
129	2021-02-06	NA
130	2021-02-07	NA
131	2021-02-08	NA
132	2021-02-09	NA
133	2021-02-10	NA
134	2021-02-11	NA
135	2021-02-12	NA
136	2021-02-13	NA
137	2021-02-14	NA
138	2021-02-15	NA
139	2021-02-16	NA
140	2021-02-17	NA
141	2021-02-18	NA
142	2021-02-19	NA
143	2021-02-20	NA
144	2021-02-21	NA

	Time	CEMS_13-PM_U
SI No.		
145	2021-02-22	NA
146	2021-02-23	NA
147	2021-02-24	NA
148	2021-02-25	NA
149	2021-02-26	1.90
150	2021-02-27	NA
151	2021-02-28	2.58
152	2021-03-01	NA
153	2021-03-02	NA
154	2021-03-03	NA
155	2021-03-04	0.09
156	2021-03-05	2.06
157	2021-03-06	NA
158	2021-03-07	NA
159	2021-03-08	1.31
160	2021-03-09	NA
161	2021-03-10	NA
162	2021-03-11	NA
163	2021-03-12	3.00
164	2021-03-13	12.13
165	2021-03-14	4.77
166	2021-03-15	4.89
167	2021-03-16	4.72
168	2021-03-17	4.92
169	2021-03-18	4.96
170	2021-03-19	5.31

	Time	CEMS_13-PM_U
SI No.		
171	2021-03-20	6.01
172	2021-03-21	6.65
173	2021-03-22	7.17
174	2021-03-23	8.03
175	2021-03-24	8.03
176	2021-03-25	8.42
177	2021-03-26	9.02
178	2021-03-27	9.03
179	2021-03-28	9.55
180	2021-03-29	9.77
181	2021-03-30	10.19
182	2021-03-31	11.09

**Report Details:** JSPLAngul | 2021-05-25 14:23:37 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_15-PM_U
Prescribed Standards	0 - 100
Maximum Data	53.6
Minimum Data	0.0
Geometric Mean	10.61
Median	0.0
Standard Deviation	15.66
Maximum Value At Time	2021-01-29
Minimum Value At Time	2020-10-07
Valid Data Points	175
Total Data Points	182
Data Availability %	96.15%

	Time	CEMS_15-PM_U
Sl No.		
1	2020-10-01	NA
2	2020-10-02	NA
3	2020-10-03	NA
4	2020-10-04	NA
5	2020-10-05	NA
6	2020-10-06	NA
7	2020-10-07	0.00
8	2020-10-08	0.00
9	2020-10-09	0.00
10	2020-10-10	0.00
11	2020-10-11	0.00
12	2020-10-12	0.00
13	2020-10-13	0.00
14	2020-10-14	0.00

	Time	CEMS_15-PM_U
SI No.		
15	2020-10-15	0.00
16	2020-10-16	0.00
17	2020-10-17	0.00
18	2020-10-18	0.00
19	2020-10-19	0.00
20	2020-10-20	0.00
21	2020-10-21	0.00
22	2020-10-22	0.00
23	2020-10-23	0.00
24	2020-10-24	0.00
25	2020-10-25	0.00
26	2020-10-26	0.00
27	2020-10-27	0.00
28	2020-10-28	0.00
29	2020-10-29	0.00
30	2020-10-30	0.00
31	2020-10-31	0.00
32	2020-11-01	0.00
33	2020-11-02	0.00
34	2020-11-03	0.00
35	2020-11-04	0.00
36	2020-11-05	0.00
37	2020-11-06	0.00
38	2020-11-07	0.00
39	2020-11-08	0.00
40	2020-11-09	0.00

	Time	CEMS_15-PM_U
SI No.		
41	2020-11-10	0.00
42	2020-11-11	0.00
43	2020-11-12	0.00
44	2020-11-13	0.00
45	2020-11-14	0.00
46	2020-11-15	0.00
47	2020-11-16	0.00
48	2020-11-17	0.00
49	2020-11-18	0.00
50	2020-11-19	0.00
51	2020-11-20	0.00
52	2020-11-21	0.00
53	2020-11-22	0.00
54	2020-11-23	0.00
55	2020-11-24	0.00
56	2020-11-25	0.00
57	2020-11-26	0.00
58	2020-11-27	0.00
59	2020-11-28	0.00
60	2020-11-29	0.00
61	2020-11-30	0.00
62	2020-12-01	0.00
63	2020-12-02	0.00
64	2020-12-03	0.00
65	2020-12-04	0.00
66	2020-12-05	0.00



	Time	CEMS_15-PM_U
SI No.		
67	2020-12-06	0.00
68	2020-12-07	0.00
69	2020-12-08	0.00
70	2020-12-09	0.00
71	2020-12-10	0.00
72	2020-12-11	0.00
73	2020-12-12	0.00
74	2020-12-13	0.00
75	2020-12-14	0.00
76	2020-12-15	0.00
77	2020-12-16	0.00
78	2020-12-17	0.00
79	2020-12-18	0.00
80	2020-12-19	0.00
81	2020-12-20	0.00
82	2020-12-21	0.00
83	2020-12-22	0.00
84	2020-12-23	0.00
85	2020-12-24	0.00
86	2020-12-25	0.00
87	2020-12-26	0.00
88	2020-12-27	0.00
89	2020-12-28	0.00
90	2020-12-29	0.00
91	2020-12-30	0.00
92	2020-12-31	0.00

	Time	CEMS_15-PM_U
SI No.		
93	2021-01-01	0.00
94	2021-01-02	0.00
95	2021-01-03	0.00
96	2021-01-04	0.00
97	2021-01-05	0.00
98	2021-01-06	0.00
99	2021-01-07	0.00
100	2021-01-08	0.00
101	2021-01-09	0.00
102	2021-01-10	0.00
103	2021-01-11	0.00
104	2021-01-12	0.00
105	2021-01-13	0.00
106	2021-01-14	0.00
107	2021-01-15	0.00
108	2021-01-16	0.00
109	2021-01-17	0.00
110	2021-01-18	0.00
111	2021-01-19	0.00
112	2021-01-20	0.00
113	2021-01-21	0.00
114	2021-01-22	0.00
115	2021-01-23	0.00
116	2021-01-24	0.00
117	2021-01-25	0.00
118	2021-01-26	0.00

	Time	CEMS_15-PM_U
SI No.		
119	2021-01-27	0.00
120	2021-01-28	31.02
121	2021-01-29	53.60
122	2021-01-30	36.84
123	2021-01-31	45.78
124	2021-02-01	30.18
125	2021-02-02	31.17
126	2021-02-03	26.46
127	2021-02-04	26.80
128	2021-02-05	21.33
129	2021-02-06	13.00
130	2021-02-07	0.04
131	2021-02-08	16.88
132	2021-02-09	27.20
133	2021-02-10	42.96
134	2021-02-11	27.84
135	2021-02-12	33.33
136	2021-02-13	29.35
137	2021-02-14	32.34
138	2021-02-15	18.32
139	2021-02-16	29.43
140	2021-02-17	32.44
141	2021-02-18	32.20
142	2021-02-19	35.76
143	2021-02-20	32.08
144	2021-02-21	28.22

	Time	CEMS_15-PM_U
SI No.		
145	2021-02-22	27.90
146	2021-02-23	21.07
147	2021-02-24	24.15
148	2021-02-25	39.78
149	2021-02-26	29.34
150	2021-02-27	25.28
151	2021-02-28	33.13
152	2021-03-01	24.85
153	2021-03-02	36.96
154	2021-03-03	27.98
155	2021-03-04	34.55
156	2021-03-05	37.50
157	2021-03-06	22.78
158	2021-03-07	19.37
159	2021-03-08	28.68
160	2021-03-09	46.43
161	2021-03-10	27.59
162	2021-03-11	18.33
163	2021-03-12	19.13
164	2021-03-13	0.04
165	2021-03-14	4.85
166	2021-03-15	25.05
167	2021-03-16	38.64
168	2021-03-17	31.60
169	2021-03-18	35.34
170	2021-03-19	33.47

	Time	CEMS_15-PM_U
SI No.		
171	2021-03-20	36.69
172	2021-03-21	NA
173	2021-03-22	20.60
174	2021-03-23	42.67
175	2021-03-24	40.08
176	2021-03-25	39.16
177	2021-03-26	44.70
178	2021-03-27	34.78
179	2021-03-28	23.63
180	2021-03-29	46.66
181	2021-03-30	37.18
182	2021-03-31	42.76

**Report Details:** JSPLAngul | 2021-05-25 14:24:57 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
Prescribed Standards	0 - 100	0 - 100	0 - 100
Maximum Data	32.49	353.68	309.84
Minimum Data	4.5	14.62	64.97
Geometric Mean	7.87	119.19	226.68
Median	6.74	104.25	220.82
Standard Deviation	3.78	78.81	39.91
Maximum Value At Time	2021-03-09	2020-11-01	2020-10-09
Minimum Value At Time	2021-03-13	2021-01-14	2020-11-05
Valid Data Points	182	182	182
Total Data Points	182	182	182
Data Availability %	100.0%	100.0%	100.0%

	Time	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
SI No.				
1	2020-10-01	9.85	125.00	128.81
2	2020-10-02	8.78	197.46	276.94
3	2020-10-03	9.00	215.18	270.29
4	2020-10-04	11.60	227.64	259.42
5	2020-10-05	14.41	242.77	267.36
6	2020-10-06	14.08	217.90	305.49
7	2020-10-07	12.42	251.11	305.14
8	2020-10-08	27.75	250.41	305.45
9	2020-10-09	9.88	251.89	309.84
10	2020-10-10	9.39	254.78	287.49
11	2020-10-11	7.95	236.61	282.46
12	2020-10-12	8.34	251.45	272.01
13	2020-10-13	16.84	260.84	278.47
14	2020-10-14	13.51	271.66	292.31

	Time	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
SI No.				
15	2020-10-15	10.50	290.54	271.83
16	2020-10-16	10.35	296.97	209.58
17	2020-10-17	9.37	287.47	173.29
18	2020-10-18	18.84	210.34	266.82
19	2020-10-19	14.50	210.44	267.00
20	2020-10-20	13.92	210.53	267.07
21	2020-10-21	13.03	210.51	267.06
22	2020-10-22	13.80	210.61	267.16
23	2020-10-23	10.38	210.63	267.16
24	2020-10-24	9.95	210.72	267.21
25	2020-10-25	8.93	210.72	267.21
26	2020-10-26	11.10	276.71	298.22
27	2020-10-27	14.61	314.59	285.26
28	2020-10-28	11.79	353.50	253.77
29	2020-10-29	8.66	353.51	253.79
30	2020-10-30	6.96	353.50	253.80
31	2020-10-31	6.78	353.46	253.75
32	2020-11-01	6.89	353.68	253.99
33	2020-11-02	6.59	346.41	274.79
34	2020-11-03	6.18	322.45	306.55
35	2020-11-04	6.62	145.52	128.78
36	2020-11-05	5.94	53.18	64.97
37	2020-11-06	7.70	94.53	172.69
38	2020-11-07	5.98	86.81	173.08
39	2020-11-08	5.93	88.96	188.33
40	2020-11-09	6.38	96.91	188.91

	Time	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
SI No.				
41	2020-11-10	23.12	100.03	196.87
42	2020-11-11	19.83	102.21	200.36
43	2020-11-12	7.23	94.05	196.85
44	2020-11-13	14.15	88.18	198.33
45	2020-11-14	5.89	97.34	213.30
46	2020-11-15	6.73	102.28	212.11
47	2020-11-16	6.70	104.85	189.68
48	2020-11-17	6.20	110.94	190.68
49	2020-11-18	5.73	110.20	195.41
50	2020-11-19	7.15	108.45	195.29
51	2020-11-20	5.74	126.21	185.97
52	2020-11-21	5.62	123.33	202.07
53	2020-11-22	5.62	118.62	213.72
54	2020-11-23	6.04	108.90	201.70
55	2020-11-24	7.29	108.76	197.83
56	2020-11-25	7.97	129.20	192.27
57	2020-11-26	6.30	123.19	211.74
58	2020-11-27	5.71	132.07	233.60
59	2020-11-28	5.96	123.75	230.23
60	2020-11-29	5.73	121.36	241.23
61	2020-11-30	5.16	128.09	230.42
62	2020-12-01	5.14	119.05	220.35
63	2020-12-02	5.28	115.97	207.21
64	2020-12-03	5.21	122.50	196.36
65	2020-12-04	5.55	130.49	197.38
66	2020-12-05	5.24	128.25	189.48



	Time	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
SI No.				
67	2020-12-06	5.47	127.13	201.98
68	2020-12-07	5.58	124.55	198.36
69	2020-12-08	7.68	122.83	213.79
70	2020-12-09	7.13	121.86	214.60
71	2020-12-10	5.85	121.77	214.47
72	2020-12-11	5.74	121.82	214.54
73	2020-12-12	7.06	121.78	214.52
74	2020-12-13	6.76	120.50	213.19
75	2020-12-14	6.77	22.42	228.82
76	2020-12-15	6.65	29.27	218.23
77	2020-12-16	6.78	27.39	214.34
78	2020-12-17	6.64	25.66	214.82
79	2020-12-18	7.08	37.47	212.00
80	2020-12-19	8.80	46.32	215.72
81	2020-12-20	7.16	51.97	212.94
82	2020-12-21	7.73	53.12	226.75
83	2020-12-22	8.01	56.37	224.87
84	2020-12-23	9.42	88.53	215.52
85	2020-12-24	9.41	96.47	222.89
86	2020-12-25	8.77	99.63	220.11
87	2020-12-26	10.62	89.38	210.92
88	2020-12-27	9.95	79.70	224.29
89	2020-12-28	6.74	84.60	217.25
90	2020-12-29	6.05	84.98	209.85
91	2020-12-30	7.07	85.70	222.31
92	2020-12-31	7.07	82.18	221.18

	Time	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
SI No.				
93	2021-01-01	6.01	86.18	219.77
94	2021-01-02	6.07	87.19	214.63
95	2021-01-03	6.36	86.89	213.64
96	2021-01-04	8.13	88.88	217.91
97	2021-01-05	6.91	90.74	202.73
98	2021-01-06	7.78	113.34	146.37
99	2021-01-07	10.19	92.60	200.64
100	2021-01-08	10.54	86.53	208.58
101	2021-01-09	9.37	90.15	187.26
102	2021-01-10	9.54	95.49	202.65
103	2021-01-11	9.04	106.17	228.87
104	2021-01-12	5.99	149.12	162.15
105	2021-01-13	6.96	110.52	132.76
106	2021-01-14	6.39	14.62	160.07
107	2021-01-15	6.04	16.87	174.31
108	2021-01-16	6.76	32.00	186.00
109	2021-01-17	7.56	34.60	169.72
110	2021-01-18	7.38	33.87	174.35
111	2021-01-19	7.46	44.80	200.66
112	2021-01-20	7.97	43.08	210.75
113	2021-01-21	13.34	42.99	210.50
114	2021-01-22	12.98	38.01	242.46
115	2021-01-23	10.46	33.83	245.88
116	2021-01-24	5.67	33.34	220.09
117	2021-01-25	5.52	36.09	230.10
118	2021-01-26	6.27	44.79	214.24

	Time	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
SI No.				
119	2021-01-27	5.73	39.86	228.12
120	2021-01-28	6.75	38.83	238.01
121	2021-01-29	7.13	25.02	263.82
122	2021-01-30	7.05	25.03	238.83
123	2021-01-31	6.22	38.17	233.19
124	2021-02-01	7.33	31.42	223.90
125	2021-02-02	7.42	29.80	210.23
126	2021-02-03	8.52	27.65	255.32
127	2021-02-04	9.20	27.10	259.15
128	2021-02-05	8.51	27.10	259.15
129	2021-02-06	6.96	28.31	259.46
130	2021-02-07	6.39	49.36	272.59
131	2021-02-08	5.49	48.61	220.45
132	2021-02-09	5.83	34.12	225.81
133	2021-02-10	6.31	48.26	221.91
134	2021-02-11	6.52	76.62	224.77
135	2021-02-12	5.50	78.83	224.19
136	2021-02-13	5.57	78.83	224.18
137	2021-02-14	5.37	55.69	239.21
138	2021-02-15	6.41	85.86	223.01
139	2021-02-16	7.22	120.79	207.45
140	2021-02-17	6.38	120.94	207.65
141	2021-02-18	6.01	120.90	207.60
142	2021-02-19	5.77	120.93	207.64
143	2021-02-20	5.62	119.90	208.67
144	2021-02-21	8.49	85.23	257.40

	Time	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
SI No.				
145	2021-02-22	5.20	85.22	257.45
146	2021-02-23	5.12	85.19	257.39
147	2021-02-24	5.01	84.72	243.57
148	2021-02-25	5.04	79.58	223.90
149	2021-02-26	5.16	89.73	227.28
150	2021-02-27	5.21	95.76	238.38
151	2021-02-28	5.89	67.95	262.62
152	2021-03-01	5.70	103.99	251.55
153	2021-03-02	5.70	103.76	254.61
154	2021-03-03	5.21	65.26	284.94
155	2021-03-04	5.17	51.20	301.64
156	2021-03-05	5.63	61.75	294.62
157	2021-03-06	5.42	71.64	306.72
158	2021-03-07	6.68	75.70	302.55
159	2021-03-08	6.95	84.08	284.52
160	2021-03-09	32.49	76.55	146.69
161	2021-03-10	5.12	71.68	187.18
162	2021-03-11	5.36	108.83	177.85
163	2021-03-12	4.84	92.65	170.36
164	2021-03-13	4.50	104.51	166.88
165	2021-03-14	4.54	99.59	188.96
166	2021-03-15	5.80	107.02	171.69
167	2021-03-16	5.65	113.60	190.96
168	2021-03-17	5.81	113.50	201.62
169	2021-03-18	5.04	111.95	196.93
170	2021-03-19	5.01	112.66	210.80

	Time	CEMS_22-PM_U	CEMS_22-SO2_U	CEMS_22-NOx_U
SI No.				
171	2021-03-20	8.64	117.30	213.31
172	2021-03-21	7.35	104.94	252.42
173	2021-03-22	6.23	106.87	251.02
174	2021-03-23	5.04	113.93	249.33
175	2021-03-24	5.95	122.39	271.98
176	2021-03-25	4.81	126.18	270.23
177	2021-03-26	5.53	133.36	279.92
178	2021-03-27	5.43	139.59	263.13
179	2021-03-28	6.27	134.59	261.89
180	2021-03-29	5.35	146.99	249.98
181	2021-03-30	5.36	151.52	263.33
182	2021-03-31	5.21	151.84	266.85

Report Details: JSPLAngul | 2021-05-25 14:28:22 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_38-PM_U
Prescribed Standards	0 - 100
Maximum Data	47.21
Minimum Data	0.0
Geometric Mean	20.5
Median	20.6
Standard Deviation	13.54
Maximum Value At Time	2020-10-19
Minimum Value At Time	2020-10-30
Valid Data Points	181
Total Data Points	182
Data Availability %	99.45%

	Time	CEMS_38-PM_U
Sl No.		
1	2020-10-01	42.14
2	2020-10-02	42.16
3	2020-10-03	41.43
4	2020-10-04	41.14
5	2020-10-05	42.26
6	2020-10-06	43.15
7	2020-10-07	40.48
8	2020-10-08	40.35
9	2020-10-09	43.28
10	2020-10-10	44.25
11	2020-10-11	43.66
12	2020-10-12	42.02
13	2020-10-13	43.32
14	2020-10-14	42.49

	Time	CEMS_38-PM_U
SI No.		
15	2020-10-15	45.22
16	2020-10-16	41.65
17	2020-10-17	42.05
18	2020-10-18	46.36
19	2020-10-19	47.21
20	2020-10-20	42.28
21	2020-10-21	42.32
22	2020-10-22	42.46
23	2020-10-23	41.45
24	2020-10-24	43.37
25	2020-10-25	43.12
26	2020-10-26	41.34
27	2020-10-27	41.18
28	2020-10-28	41.41
29	2020-10-29	23.71
30	2020-10-30	0.00
31	2020-10-31	0.00
32	2020-11-01	0.00
33	2020-11-02	0.00
34	2020-11-03	0.00
35	2020-11-04	0.00
36	2020-11-05	0.00
37	2020-11-06	0.00
38	2020-11-07	0.00
39	2020-11-08	0.00
40	2020-11-09	0.00

	Time	CEMS_38-PM_U
SI No.		
41	2020-11-10	0.00
42	2020-11-11	0.00
43	2020-11-12	0.00
44	2020-11-13	0.00
45	2020-11-14	0.00
46	2020-11-15	0.00
47	2020-11-16	0.00
48	2020-11-17	0.00
49	2020-11-18	0.00
50	2020-11-19	0.00
51	2020-11-20	0.00
52	2020-11-21	0.00
53	2020-11-22	0.00
54	2020-11-23	0.00
55	2020-11-24	0.00
56	2020-11-25	0.00
57	2020-11-26	0.00
58	2020-11-27	0.00
59	2020-11-28	0.00
60	2020-11-29	0.00
61	2020-11-30	0.00
62	2020-12-01	0.00
63	2020-12-02	0.00
64	2020-12-03	0.00
65	2020-12-04	0.00
66	2020-12-05	0.00



	Time	CEMS_38-PM_U
SI No.		
67	2020-12-06	0.00
68	2020-12-07	0.00
69	2020-12-08	14.78
70	2020-12-09	42.08
71	2020-12-10	38.76
72	2020-12-11	39.68
73	2020-12-12	37.86
74	2020-12-13	40.26
75	2020-12-14	40.07
76	2020-12-15	40.59
77	2020-12-16	25.58
78	2020-12-17	21.52
79	2020-12-18	21.45
80	2020-12-19	20.98
81	2020-12-20	21.34
82	2020-12-21	20.66
83	2020-12-22	20.50
84	2020-12-23	20.40
85	2020-12-24	20.31
86	2020-12-25	20.12
87	2020-12-26	20.12
88	2020-12-27	20.53
89	2020-12-28	20.65
90	2020-12-29	20.54
91	2020-12-30	21.04
92	2020-12-31	21.01

	Time	CEMS_38-PM_U
SI No.		
93	2021-01-01	20.23
94	2021-01-02	20.06
95	2021-01-03	20.12
96	2021-01-04	20.33
97	2021-01-05	20.23
98	2021-01-06	21.15
99	2021-01-07	21.51
100	2021-01-08	21.61
101	2021-01-09	21.30
102	2021-01-10	20.44
103	2021-01-11	20.44
104	2021-01-12	22.81
105	2021-01-13	22.57
106	2021-01-14	20.79
107	2021-01-15	20.40
108	2021-01-16	20.16
109	2021-01-17	20.84
110	2021-01-18	21.42
111	2021-01-19	21.52
112	2021-01-20	21.41
113	2021-01-21	20.84
114	2021-01-22	21.04
115	2021-01-23	21.96
116	2021-01-24	21.66
117	2021-01-25	21.62
118	2021-01-26	21.92

	Time	CEMS_38-PM_U
SI No.		
119	2021-01-27	21.13
120	2021-01-28	20.51
121	2021-01-29	20.48
122	2021-01-30	20.58
123	2021-01-31	20.88
124	2021-02-01	20.36
125	2021-02-02	20.77
126	2021-02-03	20.56
127	2021-02-04	20.33
128	2021-02-05	20.38
129	2021-02-06	20.58
130	2021-02-07	20.65
131	2021-02-08	20.49
132	2021-02-09	20.64
133	2021-02-10	20.51
134	2021-02-11	20.52
135	2021-02-12	20.60
136	2021-02-13	20.53
137	2021-02-14	20.55
138	2021-02-15	20.55
139	2021-02-16	20.58
140	2021-02-17	21.02
141	2021-02-18	20.61
142	2021-02-19	21.15
143	2021-02-20	22.20
144	2021-02-21	21.78

	Time	CEMS_38-PM_U
SI No.		
145	2021-02-22	21.92
146	2021-02-23	21.61
147	2021-02-24	21.43
148	2021-02-25	22.02
149	2021-02-26	22.23
150	2021-02-27	22.22
151	2021-02-28	21.75
152	2021-03-01	22.29
153	2021-03-02	22.28
154	2021-03-03	22.07
155	2021-03-04	21.81
156	2021-03-05	21.50
157	2021-03-06	21.96
158	2021-03-07	21.92
159	2021-03-08	21.84
160	2021-03-09	27.09
161	2021-03-10	20.10
162	2021-03-11	19.84
163	2021-03-12	21.20
164	2021-03-13	20.26
165	2021-03-14	19.79
166	2021-03-15	20.99
167	2021-03-16	19.52
168	2021-03-17	19.49
169	2021-03-18	19.67
170	2021-03-19	20.19

	Time	CEMS_38-PM_U
SI No.		
171	2021-03-20	19.34
172	2021-03-21	NA
173	2021-03-22	19.92
174	2021-03-23	19.71
175	2021-03-24	19.92
176	2021-03-25	19.65
177	2021-03-26	20.22
178	2021-03-27	20.31
179	2021-03-28	19.77
180	2021-03-29	19.86
181	2021-03-30	19.38
182	2021-03-31	19.19

**Report Details:** JSPLAngul | 2021-05-25 14:38:12 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_24-PM_U
Prescribed Standards	0 - 100
Maximum Data	74.15
Minimum Data	0.01
Geometric Mean	8.58
Median	4.36
Standard Deviation	10.77
Maximum Value At Time	2021-03-10
Minimum Value At Time	2020-10-12
Valid Data Points	154
Total Data Points	182
Data Availability %	84.62%

	Time	CEMS_24-PM_U
Sl No.		
1	2020-10-01	4.36
2	2020-10-02	4.36
3	2020-10-03	4.36
4	2020-10-04	4.36
5	2020-10-05	4.36
6	2020-10-06	4.36
7	2020-10-07	4.36
8	2020-10-08	4.19
9	2020-10-09	0.15
10	2020-10-10	0.16
11	2020-10-11	0.03
12	2020-10-12	0.01
13	2020-10-13	0.01
14	2020-10-14	0.01

	Time	CEMS_24-PM_U
SI No.		
15	2020-10-15	0.21
16	2020-10-16	0.21
17	2020-10-17	0.20
18	2020-10-18	0.21
19	2020-10-19	0.21
20	2020-10-20	0.21
21	2020-10-21	0.21
22	2020-10-22	0.21
23	2020-10-23	0.21
24	2020-10-24	0.21
25	2020-10-25	0.21
26	2020-10-26	0.21
27	2020-10-27	0.21
28	2020-10-28	0.18
29	2020-10-29	0.03
30	2020-10-30	0.02
31	2020-10-31	0.04
32	2020-11-01	0.03
33	2020-11-02	0.02
34	2020-11-03	0.03
35	2020-11-04	0.03
36	2020-11-05	0.03
37	2020-11-06	0.03
38	2020-11-07	0.03
39	2020-11-08	0.03
40	2020-11-09	0.03

	Time	CEMS_24-PM_U
SI No.		
41	2020-11-10	0.04
42	2020-11-11	0.03
43	2020-11-12	0.03
44	2020-11-13	0.03
45	2020-11-14	0.05
46	2020-11-15	0.07
47	2020-11-16	0.17
48	2020-11-17	0.08
49	2020-11-18	3.23
50	2020-11-19	2.74
51	2020-11-20	4.20
52	2020-11-21	3.26
53	2020-11-22	0.13
54	2020-11-23	3.30
55	2020-11-24	4.29
56	2020-11-25	4.20
57	2020-11-26	3.56
58	2020-11-27	3.48
59	2020-11-28	3.48
60	2020-11-29	3.48
61	2020-11-30	NA
62	2020-12-01	NA
63	2020-12-02	NA
64	2020-12-03	NA
65	2020-12-04	NA
66	2020-12-05	NA



	Time	CEMS_24-PM_U
SI No.		
67	2020-12-06	NA
68	2020-12-07	NA
69	2020-12-08	NA
70	2020-12-09	NA
71	2020-12-10	NA
72	2020-12-11	NA
73	2020-12-12	NA
74	2020-12-13	NA
75	2020-12-14	NA
76	2020-12-15	NA
77	2020-12-16	10.25
78	2020-12-17	10.23
79	2020-12-18	10.23
80	2020-12-19	10.15
81	2020-12-20	10.07
82	2020-12-21	10.17
83	2020-12-22	10.13
84	2020-12-23	10.19
85	2020-12-24	10.32
86	2020-12-25	10.47
87	2020-12-26	10.21
88	2020-12-27	10.41
89	2020-12-28	10.24
90	2020-12-29	10.53
91	2020-12-30	9.86
92	2020-12-31	9.80

	Time	CEMS_24-PM_U
SI No.		
93	2021-01-01	9.90
94	2021-01-02	9.89
95	2021-01-03	10.24
96	2021-01-04	32.22
97	2021-01-05	32.63
98	2021-01-06	10.30
99	2021-01-07	10.27
100	2021-01-08	10.23
101	2021-01-09	10.13
102	2021-01-10	10.53
103	2021-01-11	10.78
104	2021-01-12	11.09
105	2021-01-13	11.28
106	2021-01-14	10.58
107	2021-01-15	10.78
108	2021-01-16	10.77
109	2021-01-17	10.65
110	2021-01-18	10.51
111	2021-01-19	10.45
112	2021-01-20	11.06
113	2021-01-21	12.06
114	2021-01-22	10.73
115	2021-01-23	10.62
116	2021-01-24	10.83
117	2021-01-25	12.07
118	2021-01-26	12.11

	Time	CEMS_24-PM_U
SI No.		
119	2021-01-27	12.15
120	2021-01-28	12.10
121	2021-01-29	12.24
122	2021-01-30	12.01
123	2021-01-31	10.16
124	2021-02-01	10.46
125	2021-02-02	14.09
126	2021-02-03	13.89
127	2021-02-04	7.68
128	2021-02-05	3.92
129	2021-02-06	0.28
130	2021-02-07	0.33
131	2021-02-08	0.36
132	2021-02-09	2.25
133	2021-02-10	5.75
134	2021-02-11	4.39
135	2021-02-12	4.32
136	2021-02-13	3.58
137	2021-02-14	NA
138	2021-02-15	NA
139	2021-02-16	NA
140	2021-02-17	NA
141	2021-02-18	NA
142	2021-02-19	NA
143	2021-02-20	3.71
144	2021-02-21	NA

	Time	CEMS_24-PM_U
SI No.		
145	2021-02-22	NA
146	2021-02-23	NA
147	2021-02-24	NA
148	2021-02-25	3.83
149	2021-02-26	3.78
150	2021-02-27	3.95
151	2021-02-28	4.26
152	2021-03-01	4.04
153	2021-03-02	3.63
154	2021-03-03	3.88
155	2021-03-04	3.94
156	2021-03-05	3.99
157	2021-03-06	33.18
158	2021-03-07	21.11
159	2021-03-08	3.64
160	2021-03-09	22.15
161	2021-03-10	74.15
162	2021-03-11	NA
163	2021-03-12	51.86
164	2021-03-13	53.86
165	2021-03-14	27.65
166	2021-03-15	7.50
167	2021-03-16	5.65
168	2021-03-17	9.74
169	2021-03-18	11.58
170	2021-03-19	11.55

	Time	CEMS_24-PM_U
SI No.		
171	2021-03-20	12.20
172	2021-03-21	NA
173	2021-03-22	14.80
174	2021-03-23	18.31
175	2021-03-24	22.15
176	2021-03-25	22.18
177	2021-03-26	22.32
178	2021-03-27	24.01
179	2021-03-28	32.16
180	2021-03-29	32.19
181	2021-03-30	32.16
182	2021-03-31	22.62

**Report Details:** JSPLAngul | 2021-05-25 14:30:19 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_17-SO2_U	CEMS_17-NOx_U
Prescribed Standards	0 - 100	0 - 100
Maximum Data	6.86	27.38
Minimum Data	4.79	19.57
Geometric Mean	5.87	23.18
Median	5.84	22.93
Standard Deviation	0.45	1.7
Maximum Value At Time	2020-11-07	2020-11-07
Minimum Value At Time	2021-03-30	2021-03-30
Valid Data Points	181	181
Total Data Points	182	182
Data Availability %	99.45%	99.45%

	Time	CEMS_17-SO2_U	CEMS_17-NOx_U
Sl No.			
1	2020-10-01	6.30	24.51
2	2020-10-02	5.78	22.76
3	2020-10-03	5.65	22.22
4	2020-10-04	6.40	25.17
5	2020-10-05	6.69	26.08
6	2020-10-06	6.76	26.38
7	2020-10-07	6.80	26.53
8	2020-10-08	6.75	26.35
9	2020-10-09	6.76	26.40
10	2020-10-10	6.66	26.03
11	2020-10-11	6.44	25.30
12	2020-10-12	6.35	24.99
13	2020-10-13	6.27	24.72
14	2020-10-14	6.41	25.18

	Time	CEMS_17-SO2_U	CEMS_17-NOx_U
SI No.			
15	2020-10-15	6.56	25.71
16	2020-10-16	6.53	25.63
17	2020-10-17	6.30	24.82
18	2020-10-18	6.34	25.05
19	2020-10-19	6.11	24.66
20	2020-10-20	6.06	24.50
21	2020-10-21	6.07	24.56
22	2020-10-22	6.07	24.51
23	2020-10-23	6.14	24.71
24	2020-10-24	6.18	24.88
25	2020-10-25	6.28	25.21
26	2020-10-26	6.16	24.82
27	2020-10-27	6.22	25.00
28	2020-10-28	6.57	26.20
29	2020-10-29	6.61	26.31
30	2020-10-30	6.61	26.30
31	2020-10-31	6.56	26.20
32	2020-11-01	6.62	26.59
33	2020-11-02	6.46	25.98
34	2020-11-03	6.60	26.37
35	2020-11-04	6.68	26.76
36	2020-11-05	6.73	26.91
37	2020-11-06	6.73	26.89
38	2020-11-07	6.86	27.38
39	2020-11-08	6.74	26.98
40	2020-11-09	6.86	27.37

	Time	CEMS_17-SO2_U	CEMS_17-NOx_U
SI No.			
41	2020-11-10	5.85	23.89
42	2020-11-11	5.11	21.38
43	2020-11-12	6.54	26.23
44	2020-11-13	6.11	24.68
45	2020-11-14	5.59	22.81
46	2020-11-15	5.71	23.25
47	2020-11-16	5.64	23.00
48	2020-11-17	5.56	22.75
49	2020-11-18	5.49	22.51
50	2020-11-19	5.53	22.61
51	2020-11-20	5.47	22.39
52	2020-11-21	5.49	22.47
53	2020-11-22	5.42	21.97
54	2020-11-23	5.62	21.99
55	2020-11-24	5.69	22.25
56	2020-11-25	5.68	22.29
57	2020-11-26	5.71	22.24
58	2020-11-27	5.52	21.75
59	2020-11-28	5.32	21.19
60	2020-11-29	5.52	21.95
61	2020-11-30	5.31	21.18
62	2020-12-01	5.44	21.31
63	2020-12-02	5.40	21.43
64	2020-12-03	5.42	21.34
65	2020-12-04	5.37	21.18
66	2020-12-05	5.16	20.57



	Time	CEMS_17-SO2_U	CEMS_17-NOx_U
SI No.			
67	2020-12-06	5.08	20.25
68	2020-12-07	5.18	20.83
69	2020-12-08	5.11	20.46
70	2020-12-09	5.04	20.10
71	2020-12-10	4.99	19.79
72	2020-12-11	5.08	20.19
73	2020-12-12	5.10	20.45
74	2020-12-13	5.02	19.91
75	2020-12-14	5.23	20.59
76	2020-12-15	5.40	21.12
77	2020-12-16	5.48	21.29
78	2020-12-17	5.47	21.31
79	2020-12-18	5.56	21.85
80	2020-12-19	5.80	22.47
81	2020-12-20	5.74	22.11
82	2020-12-21	5.88	23.21
83	2020-12-22	5.83	22.91
84	2020-12-23	5.85	22.86
85	2020-12-24	5.87	22.88
86	2020-12-25	6.02	23.36
87	2020-12-26	6.06	23.57
88	2020-12-27	6.07	23.62
89	2020-12-28	6.00	23.11
90	2020-12-29	6.07	23.53
91	2020-12-30	6.11	23.82
92	2020-12-31	6.08	23.66

	Time	CEMS_17-SO2_U	CEMS_17-NOx_U
SI No.			
93	2021-01-01	6.04	23.63
94	2021-01-02	5.98	23.24
95	2021-01-03	5.99	23.76
96	2021-01-04	5.92	23.78
97	2021-01-05	5.93	23.27
98	2021-01-06	6.02	23.54
99	2021-01-07	5.98	23.11
100	2021-01-08	5.92	23.04
101	2021-01-09	5.77	22.57
102	2021-01-10	5.65	22.29
103	2021-01-11	5.57	22.03
104	2021-01-12	5.65	22.33
105	2021-01-13	5.61	22.35
106	2021-01-14	5.84	22.94
107	2021-01-15	6.00	23.12
108	2021-01-16	6.01	23.08
109	2021-01-17	6.12	23.56
110	2021-01-18	6.18	23.75
111	2021-01-19	6.05	23.52
112	2021-01-20	6.01	23.29
113	2021-01-21	6.13	23.62
114	2021-01-22	6.18	23.95
115	2021-01-23	6.27	24.22
116	2021-01-24	5.96	22.87
117	2021-01-25	6.17	23.53
118	2021-01-26	6.10	23.40

	Time	CEMS_17-SO2_U	CEMS_17-NOx_U
SI No.			
119	2021-01-27	6.07	23.15
120	2021-01-28	6.10	23.24
121	2021-01-29	6.21	23.59
122	2021-01-30	6.17	24.05
123	2021-01-31	6.23	23.83
124	2021-02-01	5.98	22.80
125	2021-02-02	6.26	23.91
126	2021-02-03	6.04	22.79
127	2021-02-04	5.61	21.05
128	2021-02-05	5.65	21.28
129	2021-02-06	5.80	22.84
130	2021-02-07	5.86	22.77
131	2021-02-08	5.72	22.05
132	2021-02-09	5.70	21.82
133	2021-02-10	5.67	22.09
134	2021-02-11	5.70	22.50
135	2021-02-12	5.67	22.45
136	2021-02-13	5.75	22.78
137	2021-02-14	5.74	22.50
138	2021-02-15	5.84	22.92
139	2021-02-16	5.86	23.12
140	2021-02-17	5.88	23.01
141	2021-02-18	5.88	23.29
142	2021-02-19	5.79	22.93
143	2021-02-20	6.14	24.04
144	2021-02-21	6.19	24.08

	Time	CEMS_17-SO2_U	CEMS_17-NOx_U
SI No.			
145	2021-02-22	6.08	23.80
146	2021-02-23	5.92	23.23
147	2021-02-24	5.84	23.38
148	2021-02-25	5.77	23.16
149	2021-02-26	5.63	22.90
150	2021-02-27	5.64	22.86
151	2021-02-28	5.66	22.81
152	2021-03-01	5.62	22.62
153	2021-03-02	5.65	22.62
154	2021-03-03	5.66	23.05
155	2021-03-04	5.76	23.01
156	2021-03-05	5.69	22.89
157	2021-03-06	5.70	23.03
158	2021-03-07	5.69	22.77
159	2021-03-08	5.73	22.84
160	2021-03-09	5.64	22.56
161	2021-03-10	6.25	24.71
162	2021-03-11	5.63	22.59
163	2021-03-12	5.58	21.54
164	2021-03-13	5.61	21.29
165	2021-03-14	5.71	22.69
166	2021-03-15	5.64	22.25
167	2021-03-16	5.66	22.42
168	2021-03-17	5.59	22.23
169	2021-03-18	5.57	22.04
170	2021-03-19	5.52	22.22

	Time	CEMS_17-SO2_U	CEMS_17-NOx_U
SI No.			
171	2021-03-20	5.47	22.17
172	2021-03-21	NA	NA
173	2021-03-22	5.54	22.26
174	2021-03-23	5.45	21.88
175	2021-03-24	5.37	21.63
176	2021-03-25	5.35	21.33
177	2021-03-26	5.38	21.64
178	2021-03-27	5.39	21.33
179	2021-03-28	5.36	21.47
180	2021-03-29	4.87	19.98
181	2021-03-30	4.79	19.57
182	2021-03-31	4.89	19.79

**Report Details:** JSPLAngul | 2021-05-25 14:26:54 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_18-PM_U
Prescribed Standards	0 - 100
Maximum Data	11.75
Minimum Data	0.0
Geometric Mean	4.28
Median	0.76
Standard Deviation	4.71
Maximum Value At Time	2021-02-08
Minimum Value At Time	2020-10-01
Valid Data Points	164
Total Data Points	182
Data Availability %	90.11%

	Time	CEMS_18-PM_U
Sl No.		
1	2020-10-01	0.00
2	2020-10-02	0.00
3	2020-10-03	0.00
4	2020-10-04	0.00
5	2020-10-05	0.00
6	2020-10-06	0.00
7	2020-10-07	0.00
8	2020-10-08	0.00
9	2020-10-09	0.00
10	2020-10-10	0.00
11	2020-10-11	0.00
12	2020-10-12	0.00
13	2020-10-13	0.00
14	2020-10-14	0.00

	Time	CEMS_18-PM_U
SI No.		
15	2020-10-15	0.00
16	2020-10-16	0.00
17	2020-10-17	0.00
18	2020-10-18	0.00
19	2020-10-19	0.00
20	2020-10-20	NA
21	2020-10-21	NA
22	2020-10-22	NA
23	2020-10-23	NA
24	2020-10-24	NA
25	2020-10-25	NA
26	2020-10-26	NA
27	2020-10-27	NA
28	2020-10-28	NA
29	2020-10-29	NA
30	2020-10-30	NA
31	2020-10-31	NA
32	2020-11-01	NA
33	2020-11-02	NA
34	2020-11-03	NA
35	2020-11-04	NA
36	2020-11-05	NA
37	2020-11-06	NA
38	2020-11-07	0.00
39	2020-11-08	0.00
40	2020-11-09	0.00

	Time	CEMS_18-PM_U
SI No.		
41	2020-11-10	0.00
42	2020-11-11	0.00
43	2020-11-12	0.00
44	2020-11-13	0.00
45	2020-11-14	0.00
46	2020-11-15	0.00
47	2020-11-16	0.00
48	2020-11-17	0.00
49	2020-11-18	0.00
50	2020-11-19	0.00
51	2020-11-20	0.00
52	2020-11-21	0.00
53	2020-11-22	0.00
54	2020-11-23	0.00
55	2020-11-24	0.00
56	2020-11-25	0.00
57	2020-11-26	0.00
58	2020-11-27	0.00
59	2020-11-28	0.00
60	2020-11-29	0.00
61	2020-11-30	0.00
62	2020-12-01	0.00
63	2020-12-02	0.00
64	2020-12-03	0.00
65	2020-12-04	0.00
66	2020-12-05	0.00



	Time	CEMS_18-PM_U
SI No.		
67	2020-12-06	0.00
68	2020-12-07	0.00
69	2020-12-08	0.00
70	2020-12-09	0.00
71	2020-12-10	0.00
72	2020-12-11	0.00
73	2020-12-12	0.00
74	2020-12-13	0.00
75	2020-12-14	0.00
76	2020-12-15	0.00
77	2020-12-16	0.00
78	2020-12-17	0.00
79	2020-12-18	0.00
80	2020-12-19	0.00
81	2020-12-20	0.00
82	2020-12-21	0.00
83	2020-12-22	0.00
84	2020-12-23	0.00
85	2020-12-24	0.00
86	2020-12-25	0.00
87	2020-12-26	0.00
88	2020-12-27	0.00
89	2020-12-28	0.00
90	2020-12-29	1.46
91	2020-12-30	8.49
92	2020-12-31	8.59

	Time	CEMS_18-PM_U
SI No.		
93	2021-01-01	8.62
94	2021-01-02	8.54
95	2021-01-03	8.58
96	2021-01-04	8.41
97	2021-01-05	8.51
98	2021-01-06	9.08
99	2021-01-07	9.30
100	2021-01-08	8.96
101	2021-01-09	9.33
102	2021-01-10	9.34
103	2021-01-11	9.32
104	2021-01-12	8.67
105	2021-01-13	8.26
106	2021-01-14	8.23
107	2021-01-15	7.83
108	2021-01-16	7.86
109	2021-01-17	7.60
110	2021-01-18	7.85
111	2021-01-19	8.38
112	2021-01-20	8.80
113	2021-01-21	9.26
114	2021-01-22	8.79
115	2021-01-23	8.79
116	2021-01-24	8.78
117	2021-01-25	8.99
118	2021-01-26	8.44

	Time	CEMS_18-PM_U
SI No.		
119	2021-01-27	8.43
120	2021-01-28	8.52
121	2021-01-29	8.34
122	2021-01-30	8.73
123	2021-01-31	8.50
124	2021-02-01	8.37
125	2021-02-02	8.62
126	2021-02-03	8.48
127	2021-02-04	8.34
128	2021-02-05	9.65
129	2021-02-06	11.50
130	2021-02-07	10.96
131	2021-02-08	11.75
132	2021-02-09	11.53
133	2021-02-10	11.50
134	2021-02-11	11.56
135	2021-02-12	11.10
136	2021-02-13	11.26
137	2021-02-14	11.16
138	2021-02-15	11.17
139	2021-02-16	10.73
140	2021-02-17	10.41
141	2021-02-18	10.63
142	2021-02-19	10.32
143	2021-02-20	10.17
144	2021-02-21	10.38

	Time	CEMS_18-PM_U
SI No.		
145	2021-02-22	10.59
146	2021-02-23	10.67
147	2021-02-24	10.78
148	2021-02-25	10.72
149	2021-02-26	10.74
150	2021-02-27	10.85
151	2021-02-28	10.87
152	2021-03-01	10.67
153	2021-03-02	10.05
154	2021-03-03	10.28
155	2021-03-04	10.24
156	2021-03-05	10.06
157	2021-03-06	9.88
158	2021-03-07	10.08
159	2021-03-08	8.86
160	2021-03-09	8.75
161	2021-03-10	8.95
162	2021-03-11	7.85
163	2021-03-12	1.11
164	2021-03-13	0.89
165	2021-03-14	0.85
166	2021-03-15	0.84
167	2021-03-16	0.81
168	2021-03-17	0.78
169	2021-03-18	0.77
170	2021-03-19	0.78

	Time	CEMS_18-PM_U
SI No.		
171	2021-03-20	0.74
172	2021-03-21	0.77
173	2021-03-22	0.74
174	2021-03-23	0.72
175	2021-03-24	0.73
176	2021-03-25	0.73
177	2021-03-26	0.72
178	2021-03-27	0.68
179	2021-03-28	0.69
180	2021-03-29	0.70
181	2021-03-30	0.72
182	2021-03-31	0.71

**Report Details:** JSPLAngul | 2021-05-25 14:27:36 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_16-NO <sub>x</sub> _U	CEMS_16-SO <sub>2</sub> _U
Prescribed Standards	0 -	0 - 600
Maximum Data	106.56	3487.25
Minimum Data	0.0	0.0
Geometric Mean	8.77	62.58
Median	0.0	0.0
Standard Deviation	15.78	391.56
Maximum Value At Time	2020-11-01	2020-11-03
Minimum Value At Time	2020-10-05	2020-10-01
Valid Data Points	181	181
Total Data Points	182	182
Data Availability %	99.45%	99.45%

	Time	CEMS_16-NO <sub>x</sub> _U	CEMS_16-SO <sub>2</sub> _U
Sl No.			
1	2020-10-01	35.57	0.00
2	2020-10-02	35.89	0.00
3	2020-10-03	56.08	0.00
4	2020-10-04	35.57	0.00
5	2020-10-05	0.00	0.00
6	2020-10-06	0.00	0.00
7	2020-10-07	0.00	0.00
8	2020-10-08	0.00	0.00
9	2020-10-09	0.00	0.00
10	2020-10-10	0.00	0.00
11	2020-10-11	41.14	0.00
12	2020-10-12	0.00	0.00
13	2020-10-13	0.01	0.00
14	2020-10-14	0.00	0.00

	Time	CEMS_16-NOx_U	CEMS_16-SO2_U
SI No.			
15	2020-10-15	0.00	0.00
16	2020-10-16	0.00	0.00
17	2020-10-17	0.00	0.00
18	2020-10-18	0.00	0.00
19	2020-10-19	0.00	0.00
20	2020-10-20	0.00	0.00
21	2020-10-21	0.00	0.00
22	2020-10-22	0.00	0.00
23	2020-10-23	0.00	0.00
24	2020-10-24	0.00	0.00
25	2020-10-25	0.00	0.00
26	2020-10-26	0.00	0.00
27	2020-10-27	0.00	0.00
28	2020-10-28	0.00	0.00
29	2020-10-29	0.00	0.00
30	2020-10-30	0.13	0.00
31	2020-10-31	74.98	0.00
32	2020-11-01	106.56	1292.25
33	2020-11-02	0.00	3481.32
34	2020-11-03	0.00	3487.25
35	2020-11-04	0.00	1499.02
36	2020-11-05	0.00	0.00
37	2020-11-06	0.00	0.00
38	2020-11-07	0.00	0.00
39	2020-11-08	0.00	0.00
40	2020-11-09	0.00	0.00

	Time	CEMS_16-NOx_U	CEMS_16-SO2_U
SI No.			
41	2020-11-10	0.00	0.00
42	2020-11-11	0.00	0.00
43	2020-11-12	0.00	0.00
44	2020-11-13	0.00	0.00
45	2020-11-14	0.00	0.00
46	2020-11-15	0.00	0.00
47	2020-11-16	0.00	0.00
48	2020-11-17	0.00	0.00
49	2020-11-18	0.00	0.00
50	2020-11-19	0.00	0.00
51	2020-11-20	0.00	0.00
52	2020-11-21	5.09	0.00
53	2020-11-22	44.36	0.00
54	2020-11-23	21.84	0.00
55	2020-11-24	10.95	0.05
56	2020-11-25	20.68	0.00
57	2020-11-26	23.36	0.00
58	2020-11-27	14.44	0.07
59	2020-11-28	30.33	0.00
60	2020-11-29	23.96	0.50
61	2020-11-30	23.96	0.00
62	2020-12-01	54.88	0.00
63	2020-12-02	33.12	0.03
64	2020-12-03	26.82	0.00
65	2020-12-04	22.29	0.00
66	2020-12-05	18.14	0.00



	Time	CEMS_16-NOx_U	CEMS_16-SO2_U
SI No.			
67	2020-12-06	16.46	0.04
68	2020-12-07	19.69	0.00
69	2020-12-08	22.71	0.00
70	2020-12-09	16.49	0.00
71	2020-12-10	18.07	0.00
72	2020-12-11	17.70	0.02
73	2020-12-12	13.65	0.00
74	2020-12-13	12.81	0.00
75	2020-12-14	13.79	0.00
76	2020-12-15	12.70	0.56
77	2020-12-16	16.64	0.00
78	2020-12-17	13.88	0.00
79	2020-12-18	23.47	0.01
80	2020-12-19	19.28	0.00
81	2020-12-20	22.50	0.00
82	2020-12-21	3.48	0.00
83	2020-12-22	0.00	0.00
84	2020-12-23	4.36	0.00
85	2020-12-24	0.46	0.01
86	2020-12-25	0.00	0.00
87	2020-12-26	0.00	0.00
88	2020-12-27	0.00	0.00
89	2020-12-28	0.00	0.00
90	2020-12-29	0.00	0.00
91	2020-12-30	0.00	0.00
92	2020-12-31	0.00	0.00

	Time	CEMS_16-NOx_U	CEMS_16-SO2_U
SI No.			
93	2021-01-01	0.00	0.00
94	2021-01-02	0.00	0.00
95	2021-01-03	0.00	0.00
96	2021-01-04	0.00	0.00
97	2021-01-05	0.00	0.09
98	2021-01-06	0.00	0.00
99	2021-01-07	0.00	0.33
100	2021-01-08	0.00	0.00
101	2021-01-09	0.00	0.00
102	2021-01-10	0.00	0.00
103	2021-01-11	0.00	0.00
104	2021-01-12	0.00	0.01
105	2021-01-13	0.00	0.00
106	2021-01-14	0.00	0.00
107	2021-01-15	0.00	0.04
108	2021-01-16	0.00	0.00
109	2021-01-17	0.00	0.08
110	2021-01-18	0.00	0.00
111	2021-01-19	0.00	0.02
112	2021-01-20	0.00	0.00
113	2021-01-21	0.00	0.61
114	2021-01-22	0.00	0.00
115	2021-01-23	0.00	0.08
116	2021-01-24	0.00	0.00
117	2021-01-25	0.00	0.00
118	2021-01-26	0.00	0.00

	Time	CEMS_16-NOx_U	CEMS_16-SO2_U
SI No.			
119	2021-01-27	0.00	0.00
120	2021-01-28	88.77	0.55
121	2021-01-29	2.30	19.74
122	2021-01-30	0.00	15.66
123	2021-01-31	0.00	110.42
124	2021-02-01	0.00	91.32
125	2021-02-02	0.00	78.12
126	2021-02-03	0.00	26.41
127	2021-02-04	0.00	2.03
128	2021-02-05	0.00	98.60
129	2021-02-06	0.00	103.20
130	2021-02-07	0.00	97.27
131	2021-02-08	0.00	58.40
132	2021-02-09	0.00	66.64
133	2021-02-10	0.00	58.35
134	2021-02-11	0.00	54.60
135	2021-02-12	0.00	55.05
136	2021-02-13	0.00	71.00
137	2021-02-14	0.00	59.10
138	2021-02-15	0.00	70.85
139	2021-02-16	0.00	38.71
140	2021-02-17	0.00	44.43
141	2021-02-18	0.00	27.64
142	2021-02-19	0.00	31.90
143	2021-02-20	0.00	33.74
144	2021-02-21	0.00	62.64

	Time	CEMS_16-NOx_U	CEMS_16-SO2_U
SI No.			
145	2021-02-22	0.00	68.62
146	2021-02-23	0.00	49.83
147	2021-02-24	0.00	45.10
148	2021-02-25	6.09	24.35
149	2021-02-26	10.68	0.00
150	2021-02-27	14.05	0.00
151	2021-02-28	21.83	0.00
152	2021-03-01	21.46	0.00
153	2021-03-02	21.18	0.00
154	2021-03-03	8.50	0.00
155	2021-03-04	7.44	0.00
156	2021-03-05	16.37	0.00
157	2021-03-06	25.53	0.00
158	2021-03-07	23.36	0.00
159	2021-03-08	9.77	0.00
160	2021-03-09	7.14	0.00
161	2021-03-10	0.03	0.00
162	2021-03-11	24.20	0.00
163	2021-03-12	0.02	0.07
164	2021-03-13	0.06	0.00
165	2021-03-14	23.82	0.00
166	2021-03-15	4.34	0.00
167	2021-03-16	5.74	0.00
168	2021-03-17	1.38	0.00
169	2021-03-18	12.62	0.00
170	2021-03-19	14.23	0.00

	Time	CEMS_16-NOx_U	CEMS_16-SO2_U
SI No.			
171	2021-03-20	16.49	0.00
172	2021-03-21	NA	NA
173	2021-03-22	14.06	0.00
174	2021-03-23	9.01	0.00
175	2021-03-24	24.05	0.00
176	2021-03-25	32.17	0.00
177	2021-03-26	24.19	0.00
178	2021-03-27	20.20	0.00
179	2021-03-28	25.18	0.00
180	2021-03-29	7.07	0.00
181	2021-03-30	9.39	0.00
182	2021-03-31	5.50	0.00

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# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_32-PM_U
Prescribed Standards	0 - 100
Maximum Data	97.08
Minimum Data	0.11
Geometric Mean	13.13
Median	7.63
Standard Deviation	16.8
Maximum Value At Time	2021-03-10
Minimum Value At Time	2021-02-07
Valid Data Points	139
Total Data Points	182
Data Availability %	76.37%

	Time	CEMS_32-PM_U
Sl No.		
1	2020-10-01	NA
2	2020-10-02	NA
3	2020-10-03	NA
4	2020-10-04	NA
5	2020-10-05	NA
6	2020-10-06	NA
7	2020-10-07	NA
8	2020-10-08	NA
9	2020-10-09	NA
10	2020-10-10	NA
11	2020-10-11	NA
12	2020-10-12	NA
13	2020-10-13	NA
14	2020-10-14	NA

	Time	CEMS_32-PM_U
SI No.		
15	2020-10-15	NA
16	2020-10-16	0.17
17	2020-10-17	0.17
18	2020-10-18	0.17
19	2020-10-19	0.17
20	2020-10-20	0.17
21	2020-10-21	0.17
22	2020-10-22	0.17
23	2020-10-23	0.17
24	2020-10-24	0.18
25	2020-10-25	0.18
26	2020-10-26	0.18
27	2020-10-27	0.18
28	2020-10-28	0.18
29	2020-10-29	0.18
30	2020-10-30	0.18
31	2020-10-31	0.19
32	2020-11-01	0.19
33	2020-11-02	0.18
34	2020-11-03	0.18
35	2020-11-04	0.18
36	2020-11-05	0.19
37	2020-11-06	0.18
38	2020-11-07	0.19
39	2020-11-08	0.18
40	2020-11-09	0.19

	Time	CEMS_32-PM_U
SI No.		
41	2020-11-10	0.18
42	2020-11-11	0.19
43	2020-11-12	0.19
44	2020-11-13	0.18
45	2020-11-14	0.18
46	2020-11-15	0.19
47	2020-11-16	0.19
48	2020-11-17	0.18
49	2020-11-18	0.18
50	2020-11-19	0.18
51	2020-11-20	0.18
52	2020-11-21	0.18
53	2020-11-22	0.18
54	2020-11-23	0.18
55	2020-11-24	0.19
56	2020-11-25	0.19
57	2020-11-26	0.19
58	2020-11-27	0.18
59	2020-11-28	0.19
60	2020-11-29	0.19
61	2020-11-30	NA
62	2020-12-01	NA
63	2020-12-02	NA
64	2020-12-03	NA
65	2020-12-04	NA
66	2020-12-05	NA



	Time	CEMS_32-PM_U
SI No.		
67	2020-12-06	NA
68	2020-12-07	NA
69	2020-12-08	NA
70	2020-12-09	NA
71	2020-12-10	NA
72	2020-12-11	NA
73	2020-12-12	NA
74	2020-12-13	NA
75	2020-12-14	NA
76	2020-12-15	NA
77	2020-12-16	19.63
78	2020-12-17	30.00
79	2020-12-18	43.96
80	2020-12-19	51.05
81	2020-12-20	51.51
82	2020-12-21	40.55
83	2020-12-22	48.99
84	2020-12-23	46.97
85	2020-12-24	41.62
86	2020-12-25	42.09
87	2020-12-26	42.81
88	2020-12-27	41.99
89	2020-12-28	41.88
90	2020-12-29	32.53
91	2020-12-30	12.48
92	2020-12-31	11.94

	Time	CEMS_32-PM_U
SI No.		
93	2021-01-01	11.37
94	2021-01-02	11.40
95	2021-01-03	10.73
96	2021-01-04	27.20
97	2021-01-05	17.67
98	2021-01-06	11.29
99	2021-01-07	12.34
100	2021-01-08	13.44
101	2021-01-09	14.53
102	2021-01-10	20.08
103	2021-01-11	22.92
104	2021-01-12	22.99
105	2021-01-13	18.42
106	2021-01-14	11.46
107	2021-01-15	10.55
108	2021-01-16	10.31
109	2021-01-17	11.21
110	2021-01-18	11.82
111	2021-01-19	12.54
112	2021-01-20	16.62
113	2021-01-21	23.38
114	2021-01-22	26.36
115	2021-01-23	27.85
116	2021-01-24	33.20
117	2021-01-25	34.85
118	2021-01-26	36.47

	Time	CEMS_32-PM_U
SI No.		
119	2021-01-27	36.88
120	2021-01-28	34.49
121	2021-01-29	36.32
122	2021-01-30	37.49
123	2021-01-31	23.56
124	2021-02-01	23.48
125	2021-02-02	25.67
126	2021-02-03	13.73
127	2021-02-04	7.63
128	2021-02-05	2.46
129	2021-02-06	0.90
130	2021-02-07	0.11
131	2021-02-08	0.16
132	2021-02-09	1.54
133	2021-02-10	5.24
134	2021-02-11	4.60
135	2021-02-12	4.89
136	2021-02-13	3.14
137	2021-02-14	NA
138	2021-02-15	NA
139	2021-02-16	NA
140	2021-02-17	NA
141	2021-02-18	NA
142	2021-02-19	NA
143	2021-02-20	7.29
144	2021-02-21	NA

	Time	CEMS_32-PM_U
SI No.		
145	2021-02-22	NA
146	2021-02-23	NA
147	2021-02-24	NA
148	2021-02-25	3.38
149	2021-02-26	3.34
150	2021-02-27	3.04
151	2021-02-28	2.92
152	2021-03-01	2.84
153	2021-03-02	7.95
154	2021-03-03	2.76
155	2021-03-04	3.04
156	2021-03-05	3.05
157	2021-03-06	2.81
158	2021-03-07	2.62
159	2021-03-08	3.03
160	2021-03-09	17.25
161	2021-03-10	97.08
162	2021-03-11	NA
163	2021-03-12	59.62
164	2021-03-13	63.03
165	2021-03-14	27.89
166	2021-03-15	4.16
167	2021-03-16	4.33
168	2021-03-17	6.15
169	2021-03-18	9.00
170	2021-03-19	9.44

	Time	CEMS_32-PM_U
SI No.		
171	2021-03-20	9.66
172	2021-03-21	NA
173	2021-03-22	10.01
174	2021-03-23	10.63
175	2021-03-24	11.59
176	2021-03-25	11.26
177	2021-03-26	11.39
178	2021-03-27	11.89
179	2021-03-28	12.70
180	2021-03-29	13.18
181	2021-03-30	12.87
182	2021-03-31	11.82

**Report Details:** JSPLAngul | 2021-05-25 14:32:05 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_31-PM_U
Prescribed Standards	0 - 100
Maximum Data	85.98
Minimum Data	0.38
Geometric Mean	8.77
Median	9.58
Standard Deviation	11.49
Maximum Value At Time	2021-02-03
Minimum Value At Time	2021-02-06
Valid Data Points	154
Total Data Points	182
Data Availability %	84.62%

	Time	CEMS_31-PM_U
Sl No.		
1	2020-10-01	3.18
2	2020-10-02	3.18
3	2020-10-03	3.18
4	2020-10-04	3.18
5	2020-10-05	3.18
6	2020-10-06	3.18
7	2020-10-07	3.18
8	2020-10-08	3.18
9	2020-10-09	1.22
10	2020-10-10	0.47
11	2020-10-11	2.22
12	2020-10-12	3.95
13	2020-10-13	3.95
14	2020-10-14	3.95

	Time	CEMS_31-PM_U
SI No.		
15	2020-10-15	1.65
16	2020-10-16	0.81
17	2020-10-17	0.81
18	2020-10-18	0.81
19	2020-10-19	0.81
20	2020-10-20	0.81
21	2020-10-21	0.81
22	2020-10-22	0.81
23	2020-10-23	0.81
24	2020-10-24	0.81
25	2020-10-25	0.81
26	2020-10-26	0.81
27	2020-10-27	0.81
28	2020-10-28	0.81
29	2020-10-29	0.49
30	2020-10-30	0.46
31	2020-10-31	0.47
32	2020-11-01	0.47
33	2020-11-02	0.47
34	2020-11-03	0.47
35	2020-11-04	0.47
36	2020-11-05	0.47
37	2020-11-06	0.47
38	2020-11-07	0.47
39	2020-11-08	0.47
40	2020-11-09	0.47

	Time	CEMS_31-PM_U
SI No.		
41	2020-11-10	0.47
42	2020-11-11	0.47
43	2020-11-12	0.47
44	2020-11-13	0.55
45	2020-11-14	0.54
46	2020-11-15	0.55
47	2020-11-16	0.59
48	2020-11-17	0.58
49	2020-11-18	0.73
50	2020-11-19	2.32
51	2020-11-20	3.06
52	2020-11-21	3.07
53	2020-11-22	3.07
54	2020-11-23	3.07
55	2020-11-24	3.07
56	2020-11-25	3.07
57	2020-11-26	3.07
58	2020-11-27	3.07
59	2020-11-28	3.07
60	2020-11-29	3.07
61	2020-11-30	NA
62	2020-12-01	NA
63	2020-12-02	NA
64	2020-12-03	NA
65	2020-12-04	NA
66	2020-12-05	NA



	Time	CEMS_31-PM_U
SI No.		
67	2020-12-06	NA
68	2020-12-07	NA
69	2020-12-08	NA
70	2020-12-09	NA
71	2020-12-10	NA
72	2020-12-11	NA
73	2020-12-12	NA
74	2020-12-13	NA
75	2020-12-14	NA
76	2020-12-15	NA
77	2020-12-16	9.11
78	2020-12-17	9.32
79	2020-12-18	9.32
80	2020-12-19	9.24
81	2020-12-20	9.64
82	2020-12-21	9.93
83	2020-12-22	9.58
84	2020-12-23	15.06
85	2020-12-24	9.54
86	2020-12-25	9.43
87	2020-12-26	9.44
88	2020-12-27	9.39
89	2020-12-28	9.58
90	2020-12-29	9.74
91	2020-12-30	9.49
92	2020-12-31	9.63

	Time	CEMS_31-PM_U
SI No.		
93	2021-01-01	9.68
94	2021-01-02	9.79
95	2021-01-03	9.91
96	2021-01-04	23.61
97	2021-01-05	10.47
98	2021-01-06	9.87
99	2021-01-07	10.71
100	2021-01-08	15.80
101	2021-01-09	11.10
102	2021-01-10	11.95
103	2021-01-11	8.98
104	2021-01-12	10.51
105	2021-01-13	9.65
106	2021-01-14	11.97
107	2021-01-15	11.81
108	2021-01-16	11.21
109	2021-01-17	11.03
110	2021-01-18	10.21
111	2021-01-19	10.52
112	2021-01-20	10.24
113	2021-01-21	10.26
114	2021-01-22	11.51
115	2021-01-23	11.34
116	2021-01-24	11.10
117	2021-01-25	11.15
118	2021-01-26	10.98

	Time	CEMS_31-PM_U
SI No.		
119	2021-01-27	11.09
120	2021-01-28	11.38
121	2021-01-29	11.29
122	2021-01-30	13.01
123	2021-01-31	12.38
124	2021-02-01	15.81
125	2021-02-02	37.61
126	2021-02-03	85.98
127	2021-02-04	1.43
128	2021-02-05	0.95
129	2021-02-06	0.38
130	2021-02-07	0.38
131	2021-02-08	0.40
132	2021-02-09	2.87
133	2021-02-10	10.56
134	2021-02-11	10.25
135	2021-02-12	10.23
136	2021-02-13	10.07
137	2021-02-14	NA
138	2021-02-15	NA
139	2021-02-16	NA
140	2021-02-17	NA
141	2021-02-18	NA
142	2021-02-19	NA
143	2021-02-20	10.82
144	2021-02-21	NA

	Time	CEMS_31-PM_U
SI No.		
145	2021-02-22	NA
146	2021-02-23	NA
147	2021-02-24	NA
148	2021-02-25	10.32
149	2021-02-26	10.26
150	2021-02-27	10.31
151	2021-02-28	10.21
152	2021-03-01	10.32
153	2021-03-02	10.36
154	2021-03-03	10.31
155	2021-03-04	10.27
156	2021-03-05	10.30
157	2021-03-06	14.48
158	2021-03-07	10.28
159	2021-03-08	10.36
160	2021-03-09	11.96
161	2021-03-10	47.00
162	2021-03-11	NA
163	2021-03-12	62.06
164	2021-03-13	75.80
165	2021-03-14	20.84
166	2021-03-15	14.89
167	2021-03-16	20.91
168	2021-03-17	16.85
169	2021-03-18	13.18
170	2021-03-19	13.49

	Time	CEMS_31-PM_U
SI No.		
171	2021-03-20	12.99
172	2021-03-21	NA
173	2021-03-22	11.69
174	2021-03-23	11.49
175	2021-03-24	10.93
176	2021-03-25	10.76
177	2021-03-26	10.23
178	2021-03-27	10.33
179	2021-03-28	10.24
180	2021-03-29	10.28
181	2021-03-30	10.32
182	2021-03-31	10.30

**Report Details:** JSPLAngul | 2021-05-25 14:30:58 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_10-SO2_U	CEMS_10-PM_U
Prescribed Standards	0 - 100	0 - 100
Maximum Data	17.99	98.04
Minimum Data	1.12	3.95
Geometric Mean	15.39	8.11
Median	16.62	5.7
Standard Deviation	3.91	8.57
Maximum Value At Time	2021-03-01	2020-10-16
Minimum Value At Time	2021-03-16	2021-02-08
Valid Data Points	144	177
Total Data Points	182	182
Data Availability %	79.12%	97.25%

	Time	CEMS_10-SO2_U	CEMS_10-PM_U
SI No.			
1	2020-10-01	9.46	11.69
2	2020-10-02	16.86	11.69
3	2020-10-03	16.83	11.69
4	2020-10-04	16.82	11.69
5	2020-10-05	16.83	11.69
6	2020-10-06	16.80	11.69
7	2020-10-07	16.79	8.42
8	2020-10-08	16.73	4.23
9	2020-10-09	16.76	4.34
10	2020-10-10	16.78	4.24
11	2020-10-11	16.81	4.27
12	2020-10-12	16.83	4.23
13	2020-10-13	16.52	5.24
14	2020-10-14	16.82	4.37

	Time	CEMS_10-SO2_U	CEMS_10-PM_U
SI No.			
15	2020-10-15	16.84	6.78
16	2020-10-16	16.84	98.04
17	2020-10-17	16.81	4.61
18	2020-10-18	16.82	4.28
19	2020-10-19	16.84	5.30
20	2020-10-20	16.81	4.94
21	2020-10-21	16.76	4.09
22	2020-10-22	16.82	4.24
23	2020-10-23	16.81	4.43
24	2020-10-24	16.99	6.05
25	2020-10-25	16.72	4.14
26	2020-10-26	16.65	4.68
27	2020-10-27	16.70	4.75
28	2020-10-28	16.65	5.47
29	2020-10-29	16.67	5.62
30	2020-10-30	16.67	7.01
31	2020-10-31	16.65	9.41
32	2020-11-01	16.61	7.67
33	2020-11-02	16.60	17.99
34	2020-11-03	16.61	39.27
35	2020-11-04	16.62	16.30
36	2020-11-05	16.54	4.56
37	2020-11-06	16.59	4.38
38	2020-11-07	16.60	6.01
39	2020-11-08	16.59	5.71
40	2020-11-09	16.63	5.35

	Time	CEMS_10-SO2_U	CEMS_10-PM_U
SI No.			
41	2020-11-10	12.47	5.77
42	2020-11-11	7.17	5.23
43	2020-11-12	16.64	4.58
44	2020-11-13	16.65	4.76
45	2020-11-14	16.61	5.90
46	2020-11-15	16.59	5.73
47	2020-11-16	16.61	8.14
48	2020-11-17	16.58	7.44
49	2020-11-18	16.63	6.66
50	2020-11-19	16.59	4.31
51	2020-11-20	16.56	4.71
52	2020-11-21	16.63	5.85
53	2020-11-22	16.70	6.60
54	2020-11-23	16.70	7.11
55	2020-11-24	16.70	6.45
56	2020-11-25	16.65	11.26
57	2020-11-26	16.63	8.47
58	2020-11-27	16.58	5.09
59	2020-11-28	16.62	4.36
60	2020-11-29	16.63	6.14
61	2020-11-30	16.60	4.31
62	2020-12-01	16.57	4.54
63	2020-12-02	16.59	4.48
64	2020-12-03	16.57	4.79
65	2020-12-04	16.57	5.55
66	2020-12-05	16.56	4.50



	Time	CEMS_10-SO2_U	CEMS_10-PM_U
SI No.			
67	2020-12-06	16.54	4.76
68	2020-12-07	16.54	4.40
69	2020-12-08	16.53	4.44
70	2020-12-09	16.55	4.47
71	2020-12-10	16.49	4.57
72	2020-12-11	16.58	5.18
73	2020-12-12	16.57	8.63
74	2020-12-13	16.61	7.25
75	2020-12-14	16.56	10.02
76	2020-12-15	16.69	12.95
77	2020-12-16	16.55	33.34
78	2020-12-17	16.77	12.92
79	2020-12-18	16.63	9.40
80	2020-12-19	16.67	5.60
81	2020-12-20	16.61	4.74
82	2020-12-21	16.62	4.28
83	2020-12-22	NA	NA
84	2020-12-23	NA	NA
85	2020-12-24	16.68	5.26
86	2020-12-25	16.68	4.06
87	2020-12-26	NA	4.16
88	2020-12-27	16.58	4.25
89	2020-12-28	14.80	4.32
90	2020-12-29	16.63	5.29
91	2020-12-30	16.65	5.06
92	2020-12-31	16.62	6.98

	Time	CEMS_10-SO2_U	CEMS_10-PM_U
SI No.			
93	2021-01-01	16.56	5.67
94	2021-01-02	16.56	4.38
95	2021-01-03	16.58	5.27
96	2021-01-04	16.53	4.20
97	2021-01-05	16.47	4.30
98	2021-01-06	16.60	4.12
99	2021-01-07	16.61	4.25
100	2021-01-08	16.56	4.10
101	2021-01-09	16.80	4.10
102	2021-01-10	16.64	4.03
103	2021-01-11	16.60	4.31
104	2021-01-12	16.56	4.33
105	2021-01-13	16.60	4.07
106	2021-01-14	16.87	4.06
107	2021-01-15	NA	4.65
108	2021-01-16	NA	10.70
109	2021-01-17	NA	19.95
110	2021-01-18	NA	8.50
111	2021-01-19	NA	10.67
112	2021-01-20	NA	7.76
113	2021-01-21	NA	8.91
114	2021-01-22	NA	10.45
115	2021-01-23	16.64	14.01
116	2021-01-24	16.72	12.65
117	2021-01-25	16.68	5.11
118	2021-01-26	16.62	5.76

	Time	CEMS_10-SO2_U	CEMS_10-PM_U
SI No.			
119	2021-01-27	16.59	6.27
120	2021-01-28	16.61	4.45
121	2021-01-29	16.60	8.91
122	2021-01-30	16.63	18.03
123	2021-01-31	16.68	13.74
124	2021-02-01	16.64	11.08
125	2021-02-02	16.64	9.76
126	2021-02-03	16.67	11.76
127	2021-02-04	16.73	6.75
128	2021-02-05	16.73	4.35
129	2021-02-06	16.98	6.15
130	2021-02-07	NA	9.78
131	2021-02-08	NA	3.95
132	2021-02-09	NA	5.21
133	2021-02-10	NA	4.90
134	2021-02-11	NA	5.39
135	2021-02-12	NA	13.50
136	2021-02-13	NA	8.93
137	2021-02-14	NA	6.86
138	2021-02-15	NA	6.32
139	2021-02-16	NA	8.31
140	2021-02-17	NA	6.18
141	2021-02-18	NA	11.23
142	2021-02-19	NA	16.46
143	2021-02-20	NA	27.11
144	2021-02-21	NA	4.38

	Time	CEMS_10-SO2_U	CEMS_10-PM_U
SI No.			
145	2021-02-22	NA	7.27
146	2021-02-23	NA	4.46
147	2021-02-24	NA	6.46
148	2021-02-25	16.75	9.01
149	2021-02-26	16.92	4.70
150	2021-02-27	16.96	5.60
151	2021-02-28	17.08	8.99
152	2021-03-01	17.99	NA
153	2021-03-02	17.03	NA
154	2021-03-03	17.31	12.68
155	2021-03-04	17.05	10.12
156	2021-03-05	16.94	6.00
157	2021-03-06	11.35	5.41
158	2021-03-07	1.16	4.79
159	2021-03-08	1.15	4.28
160	2021-03-09	1.16	4.19
161	2021-03-10	1.14	7.13
162	2021-03-11	1.14	7.41
163	2021-03-12	1.14	4.00
164	2021-03-13	1.13	8.93
165	2021-03-14	NA	4.05
166	2021-03-15	NA	3.97
167	2021-03-16	1.12	3.99
168	2021-03-17	1.13	3.97
169	2021-03-18	12.90	4.06
170	2021-03-19	14.19	5.70

	Time	CEMS_10-SO2_U	CEMS_10-PM_U
SI No.			
171	2021-03-20	14.08	9.80
172	2021-03-21	14.04	NA
173	2021-03-22	13.97	5.94
174	2021-03-23	13.95	12.96
175	2021-03-24	13.92	5.65
176	2021-03-25	NA	11.30
177	2021-03-26	NA	13.67
178	2021-03-27	NA	25.81
179	2021-03-28	NA	29.62
180	2021-03-29	NA	11.33
181	2021-03-30	NA	6.51
182	2021-03-31	NA	6.83

**Report Details:** JSPLAngul | 2021-05-25 14:21:10 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_11-SO2_U	CEMS_11-PM_U
Prescribed Standards	0 - 100	0 - 100
Maximum Data	177.4	110.4
Minimum Data	0.61	3.78
Geometric Mean	56.74	13.66
Median	54.84	8.94
Standard Deviation	41.6	19.16
Maximum Value At Time	2020-10-29	2020-10-01
Minimum Value At Time	2021-03-13	2021-01-12
Valid Data Points	144	177
Total Data Points	182	182
Data Availability %	79.12%	97.25%

	Time	CEMS_11-SO2_U	CEMS_11-PM_U
SI No.			
1	2020-10-01	11.55	110.40
2	2020-10-02	25.40	110.40
3	2020-10-03	20.51	110.40
4	2020-10-04	23.67	110.40
5	2020-10-05	20.81	110.40
6	2020-10-06	19.30	110.40
7	2020-10-07	15.16	56.29
8	2020-10-08	34.42	15.69
9	2020-10-09	36.96	27.84
10	2020-10-10	19.35	8.76
11	2020-10-11	18.56	7.98
12	2020-10-12	16.61	7.03
13	2020-10-13	20.14	7.71
14	2020-10-14	85.72	7.93

	Time	CEMS_11-SO2_U	CEMS_11-PM_U
SI No.			
15	2020-10-15	68.36	18.36
16	2020-10-16	46.61	13.40
17	2020-10-17	47.16	23.50
18	2020-10-18	64.35	16.91
19	2020-10-19	56.50	11.79
20	2020-10-20	32.59	9.27
21	2020-10-21	32.50	9.03
22	2020-10-22	31.88	23.40
23	2020-10-23	31.87	13.01
24	2020-10-24	32.35	5.01
25	2020-10-25	32.81	6.44
26	2020-10-26	71.37	16.53
27	2020-10-27	66.02	14.13
28	2020-10-28	93.47	8.73
29	2020-10-29	177.40	9.11
30	2020-10-30	162.58	10.45
31	2020-10-31	135.16	11.18
32	2020-11-01	123.72	19.13
33	2020-11-02	109.68	9.95
34	2020-11-03	142.06	12.39
35	2020-11-04	161.35	11.17
36	2020-11-05	126.24	11.03
37	2020-11-06	142.68	11.28
38	2020-11-07	153.45	12.46
39	2020-11-08	121.76	10.26
40	2020-11-09	145.44	12.84

	Time	CEMS_11-SO2_U	CEMS_11-PM_U
SI No.			
41	2020-11-10	152.77	13.07
42	2020-11-11	134.67	15.77
43	2020-11-12	134.77	13.79
44	2020-11-13	145.52	18.68
45	2020-11-14	146.13	15.48
46	2020-11-15	83.59	10.82
47	2020-11-16	81.62	11.05
48	2020-11-17	63.07	17.00
49	2020-11-18	35.35	10.45
50	2020-11-19	36.41	8.38
51	2020-11-20	63.79	8.54
52	2020-11-21	72.59	9.39
53	2020-11-22	112.68	13.96
54	2020-11-23	140.27	15.48
55	2020-11-24	125.55	11.34
56	2020-11-25	82.51	12.55
57	2020-11-26	80.32	37.97
58	2020-11-27	42.83	18.66
59	2020-11-28	40.36	7.55
60	2020-11-29	76.61	8.76
61	2020-11-30	98.65	14.71
62	2020-12-01	150.21	11.08
63	2020-12-02	67.04	8.21
64	2020-12-03	105.62	7.14
65	2020-12-04	61.10	8.51
66	2020-12-05	67.92	11.25



	Time	CEMS_11-SO2_U	CEMS_11-PM_U
SI No.			
67	2020-12-06	44.29	11.54
68	2020-12-07	38.39	11.30
69	2020-12-08	37.30	14.71
70	2020-12-09	35.71	15.54
71	2020-12-10	34.53	11.00
72	2020-12-11	36.42	5.75
73	2020-12-12	41.98	11.97
74	2020-12-13	35.22	10.07
75	2020-12-14	35.16	12.28
76	2020-12-15	35.15	12.17
77	2020-12-16	36.90	9.29
78	2020-12-17	22.05	12.95
79	2020-12-18	17.26	5.38
80	2020-12-19	21.81	6.50
81	2020-12-20	20.38	9.50
82	2020-12-21	21.34	13.54
83	2020-12-22	NA	NA
84	2020-12-23	NA	NA
85	2020-12-24	17.55	15.97
86	2020-12-25	20.93	8.94
87	2020-12-26	NA	17.17
88	2020-12-27	16.76	14.05
89	2020-12-28	16.98	6.09
90	2020-12-29	17.90	5.26
91	2020-12-30	16.05	6.09
92	2020-12-31	28.02	6.24

	Time	CEMS_11-SO2_U	CEMS_11-PM_U
SI No.			
93	2021-01-01	40.06	5.56
94	2021-01-02	46.37	4.45
95	2021-01-03	50.33	4.36
96	2021-01-04	53.55	4.27
97	2021-01-05	59.67	5.65
98	2021-01-06	59.96	4.70
99	2021-01-07	59.51	5.57
100	2021-01-08	61.10	5.83
101	2021-01-09	64.34	6.75
102	2021-01-10	64.19	5.67
103	2021-01-11	64.73	4.97
104	2021-01-12	66.61	3.78
105	2021-01-13	66.04	4.27
106	2021-01-14	61.18	5.55
107	2021-01-15	NA	6.53
108	2021-01-16	NA	7.81
109	2021-01-17	NA	8.85
110	2021-01-18	NA	9.03
111	2021-01-19	NA	5.69
112	2021-01-20	NA	5.42
113	2021-01-21	NA	5.57
114	2021-01-22	NA	5.37
115	2021-01-23	62.02	5.76
116	2021-01-24	61.41	7.65
117	2021-01-25	59.89	9.68
118	2021-01-26	61.24	14.38

	Time	CEMS_11-SO2_U	CEMS_11-PM_U
SI No.			
119	2021-01-27	62.75	5.18
120	2021-01-28	62.38	5.93
121	2021-01-29	61.83	6.47
122	2021-01-30	61.51	6.13
123	2021-01-31	59.90	7.08
124	2021-02-01	59.41	10.04
125	2021-02-02	60.67	8.25
126	2021-02-03	59.61	8.93
127	2021-02-04	58.48	5.23
128	2021-02-05	57.97	5.04
129	2021-02-06	57.20	4.58
130	2021-02-07	NA	4.03
131	2021-02-08	NA	6.85
132	2021-02-09	NA	15.19
133	2021-02-10	NA	11.76
134	2021-02-11	NA	32.26
135	2021-02-12	NA	10.91
136	2021-02-13	NA	9.14
137	2021-02-14	NA	7.68
138	2021-02-15	NA	13.51
139	2021-02-16	NA	13.67
140	2021-02-17	NA	10.93
141	2021-02-18	NA	8.14
142	2021-02-19	NA	24.18
143	2021-02-20	NA	10.60
144	2021-02-21	NA	6.78

	Time	CEMS_11-SO2_U	CEMS_11-PM_U
SI No.			
145	2021-02-22	NA	6.67
146	2021-02-23	NA	7.24
147	2021-02-24	NA	6.14
148	2021-02-25	57.01	8.34
149	2021-02-26	57.22	6.68
150	2021-02-27	57.59	6.96
151	2021-02-28	57.49	5.74
152	2021-03-01	56.52	NA
153	2021-03-02	56.13	NA
154	2021-03-03	50.24	8.11
155	2021-03-04	45.38	10.06
156	2021-03-05	42.45	10.83
157	2021-03-06	26.94	8.28
158	2021-03-07	0.65	8.42
159	2021-03-08	0.62	6.65
160	2021-03-09	0.63	4.26
161	2021-03-10	0.62	5.57
162	2021-03-11	0.62	6.72
163	2021-03-12	0.62	4.65
164	2021-03-13	0.61	6.07
165	2021-03-14	NA	6.38
166	2021-03-15	NA	5.65
167	2021-03-16	0.62	5.48
168	2021-03-17	0.62	6.71
169	2021-03-18	13.97	6.24
170	2021-03-19	15.52	8.06

	Time	CEMS_11-SO2_U	CEMS_11-PM_U
SI No.			
171	2021-03-20	15.44	13.07
172	2021-03-21	15.38	NA
173	2021-03-22	15.26	8.66
174	2021-03-23	15.24	7.30
175	2021-03-24	15.34	8.35
176	2021-03-25	NA	8.30
177	2021-03-26	NA	10.39
178	2021-03-27	NA	11.04
179	2021-03-28	NA	8.92
180	2021-03-29	NA	7.54
181	2021-03-30	NA	11.16
182	2021-03-31	NA	9.83

**Report Details:** JSPLAngul | 2021-05-25 14:21:55 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
Prescribed Standards	0 - 100	0 - 100	0 - 100
Maximum Data	35.03	1878.86	709.05
Minimum Data	0.23	22.76	1.48
Geometric Mean	15.54	719.45	294.93
Median	17.73	652.88	341.46
Standard Deviation	7.25	447.36	214.1
Maximum Value At Time	2020-10-14	2020-10-18	2021-03-31
Minimum Value At Time	2021-01-16	2021-03-14	2020-11-03
Valid Data Points	175	174	162
Total Data Points	182	182	182
Data Availability %	96.15%	95.6%	89.01%

	Time	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
Sl No.				
1	2020-10-01	23.74	263.11	NA
2	2020-10-02	23.23	237.43	NA
3	2020-10-03	27.90	259.48	NA
4	2020-10-04	23.06	268.11	NA
5	2020-10-05	21.84	322.56	NA
6	2020-10-06	21.90	301.58	NA
7	2020-10-07	22.35	275.60	NA
8	2020-10-08	20.96	277.81	NA
9	2020-10-09	20.48	318.19	NA
10	2020-10-10	21.79	346.42	NA
11	2020-10-11	21.25	338.09	NA
12	2020-10-12	20.99	347.75	NA
13	2020-10-13	22.94	353.16	NA
14	2020-10-14	35.03	824.48	346.04

	Time	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
SI No.				
15	2020-10-15	27.05	1814.82	372.41
16	2020-10-16	23.51	1810.37	375.54
17	2020-10-17	22.39	1825.15	387.73
18	2020-10-18	21.84	1878.86	393.63
19	2020-10-19	21.44	1835.54	401.19
20	2020-10-20	21.26	1806.46	355.49
21	2020-10-21	20.88	1872.83	426.97
22	2020-10-22	22.72	1749.82	262.13
23	2020-10-23	29.33	1715.70	220.64
24	2020-10-24	30.76	1672.31	217.63
25	2020-10-25	31.42	1664.07	218.08
26	2020-10-26	29.68	1626.94	220.66
27	2020-10-27	26.35	1703.30	273.29
28	2020-10-28	26.33	1766.80	322.24
29	2020-10-29	18.82	939.38	310.75
30	2020-10-30	22.18	362.30	259.21
31	2020-10-31	21.16	282.00	258.21
32	2020-11-01	20.78	291.69	261.55
33	2020-11-02	20.98	220.48	164.13
34	2020-11-03	12.25	256.23	1.48
35	2020-11-04	7.16	396.44	1.53
36	2020-11-05	7.54	387.40	1.57
37	2020-11-06	8.17	346.77	1.52
38	2020-11-07	10.96	434.94	2.66
39	2020-11-08	20.20	403.89	1.58
40	2020-11-09	12.27	394.12	1.59

	Time	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
SI No.				
41	2020-11-10	6.59	535.53	1.78
42	2020-11-11	4.80	651.45	1.86
43	2020-11-12	5.07	430.24	1.63
44	2020-11-13	5.09	360.58	1.51
45	2020-11-14	5.59	454.04	1.60
46	2020-11-15	6.00	475.98	1.62
47	2020-11-16	7.11	485.48	1.60
48	2020-11-17	6.88	466.22	1.53
49	2020-11-18	6.72	487.57	1.58
50	2020-11-19	5.63	524.56	1.62
51	2020-11-20	9.71	525.28	1.62
52	2020-11-21	19.20	497.25	5.60
53	2020-11-22	19.68	632.18	1.71
54	2020-11-23	17.97	637.32	1.80
55	2020-11-24	18.48	742.62	1.88
56	2020-11-25	18.26	739.57	1.89
57	2020-11-26	18.90	784.14	1.82
58	2020-11-27	19.77	727.82	1.74
59	2020-11-28	19.04	694.68	1.70
60	2020-11-29	18.49	654.20	1.75
61	2020-11-30	9.25	644.25	1.61
62	2020-12-01	4.12	732.93	4.74
63	2020-12-02	4.05	687.84	5.05
64	2020-12-03	3.99	683.14	1.64
65	2020-12-04	4.74	669.45	1.64
66	2020-12-05	5.30	685.29	1.60



	Time	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
SI No.				
67	2020-12-06	5.11	727.96	1.66
68	2020-12-07	5.37	717.63	5.81
69	2020-12-08	4.13	706.35	1.57
70	2020-12-09	8.52	727.76	1.66
71	2020-12-10	18.49	883.81	1.82
72	2020-12-11	19.45	992.20	1.97
73	2020-12-12	19.66	1053.97	1.96
74	2020-12-13	19.42	1077.15	2.01
75	2020-12-14	19.02	1088.35	2.03
76	2020-12-15	19.01	993.88	1.83
77	2020-12-16	18.07	845.07	1.59
78	2020-12-17	18.79	861.34	1.68
79	2020-12-18	18.96	587.27	112.87
80	2020-12-19	19.22	433.24	179.97
81	2020-12-20	18.43	369.42	193.70
82	2020-12-21	18.37	332.21	196.93
83	2020-12-22	9.21	331.47	196.67
84	2020-12-23	3.16	329.60	202.79
85	2020-12-24	3.05	327.52	202.74
86	2020-12-25	2.03	334.20	233.44
87	2020-12-26	1.10	378.78	241.54
88	2020-12-27	1.63	381.83	240.07
89	2020-12-28	2.03	350.31	240.99
90	2020-12-29	6.12	347.08	258.88
91	2020-12-30	18.73	410.56	263.21
92	2020-12-31	18.69	425.95	266.15

	Time	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
SI No.				
93	2021-01-01	18.22	426.70	278.90
94	2021-01-02	18.37	440.53	247.99
95	2021-01-03	18.18	453.47	281.75
96	2021-01-04	17.54	468.63	295.10
97	2021-01-05	17.44	534.29	340.81
98	2021-01-06	8.24	596.42	326.31
99	2021-01-07	3.04	686.35	320.41
100	2021-01-08	5.39	747.80	342.11
101	2021-01-09	18.32	758.72	344.33
102	2021-01-10	18.43	790.00	370.15
103	2021-01-11	17.89	835.25	378.48
104	2021-01-12	6.98	834.35	410.21
105	2021-01-13	0.67	812.91	428.03
106	2021-01-14	NA	NA	NA
107	2021-01-15	NA	NA	NA
108	2021-01-16	0.23	777.14	399.12
109	2021-01-17	NA	NA	NA
110	2021-01-18	NA	NA	NA
111	2021-01-19	NA	NA	NA
112	2021-01-20	18.46	851.57	460.08
113	2021-01-21	NA	NA	NA
114	2021-01-22	NA	NA	NA
115	2021-01-23	17.73	751.54	657.59
116	2021-01-24	18.10	694.22	524.04
117	2021-01-25	18.91	732.31	463.61
118	2021-01-26	19.19	796.72	454.92

	Time	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
SI No.				
119	2021-01-27	17.41	897.99	496.70
120	2021-01-28	16.97	861.14	441.81
121	2021-01-29	17.84	827.35	484.00
122	2021-01-30	17.52	815.92	497.82
123	2021-01-31	17.51	880.91	511.45
124	2021-02-01	17.41	804.96	502.52
125	2021-02-02	17.63	832.81	506.17
126	2021-02-03	17.41	894.56	526.25
127	2021-02-04	17.97	895.49	513.15
128	2021-02-05	17.32	916.77	527.60
129	2021-02-06	17.55	956.09	475.82
130	2021-02-07	17.23	1028.00	541.33
131	2021-02-08	17.73	961.85	530.81
132	2021-02-09	17.31	985.17	509.70
133	2021-02-10	20.65	993.80	462.04
134	2021-02-11	17.84	1101.92	529.76
135	2021-02-12	18.73	1145.81	549.47
136	2021-02-13	17.50	1228.93	569.97
137	2021-02-14	17.90	1167.75	493.74
138	2021-02-15	18.79	1234.23	541.18
139	2021-02-16	17.47	1315.91	588.94
140	2021-02-17	17.53	1282.56	591.51
141	2021-02-18	17.23	1277.54	596.88
142	2021-02-19	17.05	1337.43	611.79
143	2021-02-20	16.97	1358.75	613.23
144	2021-02-21	16.88	1388.07	632.12

	Time	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
SI No.				
145	2021-02-22	17.18	1446.79	644.72
146	2021-02-23	17.19	1571.36	668.58
147	2021-02-24	17.17	1629.63	690.47
148	2021-02-25	17.62	1053.74	504.07
149	2021-02-26	17.76	475.19	398.57
150	2021-02-27	17.59	442.46	397.99
151	2021-02-28	17.16	207.69	334.75
152	2021-03-01	17.47	200.41	363.01
153	2021-03-02	16.72	147.75	344.70
154	2021-03-03	16.98	380.64	396.31
155	2021-03-04	17.09	679.22	440.66
156	2021-03-05	17.21	594.14	433.58
157	2021-03-06	17.12	270.27	379.96
158	2021-03-07	17.06	485.72	436.00
159	2021-03-08	17.14	456.09	417.05
160	2021-03-09	17.88	331.58	297.10
161	2021-03-10	20.20	358.21	291.23
162	2021-03-11	20.58	391.95	388.91
163	2021-03-12	10.28	332.35	360.34
164	2021-03-13	4.03	NA	353.00
165	2021-03-14	1.26	22.76	354.76
166	2021-03-15	1.08	291.20	420.00
167	2021-03-16	1.19	478.64	454.23
168	2021-03-17	0.72	578.26	479.89
169	2021-03-18	1.09	632.62	507.93
170	2021-03-19	0.89	838.25	556.93

	Time	CEMS_9-PM_U	CEMS_9-SO2_U	CEMS_9-NOx_U
SI No.				
171	2021-03-20	10.97	651.56	549.06
172	2021-03-21	19.98	67.75	441.21
173	2021-03-22	18.44	50.05	458.56
174	2021-03-23	16.56	179.46	467.47
175	2021-03-24	18.46	103.48	451.27
176	2021-03-25	18.18	105.63	462.42
177	2021-03-26	18.32	131.48	449.47
178	2021-03-27	18.29	163.11	438.88
179	2021-03-28	17.34	312.40	482.19
180	2021-03-29	17.87	768.77	570.93
181	2021-03-30	17.80	1021.66	645.00
182	2021-03-31	17.77	1135.31	709.05

**Report Details:** JSPLAngul | 2021-05-25 14:20:33 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
Prescribed Standards	0 - 100	0 -	0 -
Maximum Data	27.73	187.32	608.75
Minimum Data	0.0	16.5	39.8
Geometric Mean	6.1	82.21	225.64
Median	5.11	61.11	227.57
Standard Deviation	5.75	46.3	125.16
Maximum Value At Time	2021-03-14	2020-10-13	2020-12-23
Minimum Value At Time	2020-11-05	2021-01-17	2021-01-17
Valid Data Points	182	182	182
Total Data Points	182	182	182
Data Availability %	100.0%	100.0%	100.0%

	Time	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
Sl No.				
1	2020-10-01	8.47	53.71	308.19
2	2020-10-02	6.88	125.17	508.84
3	2020-10-03	5.72	129.10	507.19
4	2020-10-04	8.50	126.31	468.93
5	2020-10-05	8.62	111.49	404.15
6	2020-10-06	9.55	127.72	467.20
7	2020-10-07	6.53	131.76	500.42
8	2020-10-08	10.31	137.60	516.21
9	2020-10-09	9.06	91.33	331.30
10	2020-10-10	3.34	137.74	357.48
11	2020-10-11	1.59	167.65	379.13
12	2020-10-12	0.84	163.90	359.94
13	2020-10-13	0.31	187.32	371.78
14	2020-10-14	0.38	175.49	373.56

	Time	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
SI No.				
15	2020-10-15	10.28	124.41	376.93
16	2020-10-16	11.76	118.39	395.16
17	2020-10-17	9.99	105.41	292.40
18	2020-10-18	1.61	35.21	86.41
19	2020-10-19	0.64	35.85	87.68
20	2020-10-20	0.77	36.40	88.82
21	2020-10-21	1.28	36.89	90.10
22	2020-10-22	1.18	37.50	91.66
23	2020-10-23	4.84	37.86	92.64
24	2020-10-24	1.33	38.25	93.81
25	2020-10-25	0.20	38.81	94.61
26	2020-10-26	0.18	46.19	111.40
27	2020-10-27	1.56	49.30	118.65
28	2020-10-28	10.87	50.00	125.28
29	2020-10-29	9.49	49.85	134.54
30	2020-10-30	2.14	47.84	130.45
31	2020-10-31	2.07	47.84	133.42
32	2020-11-01	2.21	50.43	142.45
33	2020-11-02	1.57	83.26	225.01
34	2020-11-03	0.01	166.70	441.17
35	2020-11-04	0.01	145.28	282.31
36	2020-11-05	0.00	44.83	105.61
37	2020-11-06	0.00	45.69	106.91
38	2020-11-07	0.00	46.76	107.79
39	2020-11-08	0.00	47.65	108.90
40	2020-11-09	0.00	47.94	109.72

	Time	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
SI No.				
41	2020-11-10	0.00	47.94	110.64
42	2020-11-11	0.00	48.01	112.66
43	2020-11-12	0.00	47.72	112.15
44	2020-11-13	0.00	48.94	113.85
45	2020-11-14	0.00	49.91	116.27
46	2020-11-15	0.00	50.10	117.22
47	2020-11-16	0.00	50.15	117.80
48	2020-11-17	0.00	50.25	118.96
49	2020-11-18	0.00	50.82	120.39
50	2020-11-19	0.00	51.29	121.10
51	2020-11-20	0.00	52.05	123.54
52	2020-11-21	0.00	51.45	122.22
53	2020-11-22	0.00	59.34	130.77
54	2020-11-23	0.00	60.50	130.86
55	2020-11-24	0.00	59.41	133.15
56	2020-11-25	0.00	58.93	131.26
57	2020-11-26	0.00	61.35	137.54
58	2020-11-27	0.00	63.42	153.48
59	2020-11-28	20.48	80.82	316.63
60	2020-11-29	22.98	51.66	329.07
61	2020-11-30	10.60	54.53	277.34
62	2020-12-01	15.40	55.96	272.96
63	2020-12-02	9.46	58.43	283.02
64	2020-12-03	8.00	57.18	309.34
65	2020-12-04	4.23	58.48	316.79
66	2020-12-05	7.25	59.88	311.70



	Time	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
SI No.				
67	2020-12-06	7.73	59.61	312.10
68	2020-12-07	5.24	60.23	313.98
69	2020-12-08	4.94	59.51	354.50
70	2020-12-09	5.10	60.08	394.63
71	2020-12-10	3.02	59.07	389.84
72	2020-12-11	3.30	60.53	401.32
73	2020-12-12	12.74	60.24	395.75
74	2020-12-13	9.44	61.54	400.70
75	2020-12-14	3.33	62.99	407.87
76	2020-12-15	1.44	64.59	415.39
77	2020-12-16	3.96	65.95	421.89
78	2020-12-17	3.65	66.35	425.70
79	2020-12-18	2.26	67.78	434.45
80	2020-12-19	0.80	69.29	443.21
81	2020-12-20	0.37	67.86	434.81
82	2020-12-21	0.88	65.80	427.50
83	2020-12-22	12.35	60.87	407.48
84	2020-12-23	8.76	163.40	608.75
85	2020-12-24	5.08	150.90	349.17
86	2020-12-25	7.95	145.81	262.88
87	2020-12-26	12.30	134.53	269.16
88	2020-12-27	10.45	141.76	274.26
89	2020-12-28	13.56	92.97	226.47
90	2020-12-29	9.61	91.95	255.08
91	2020-12-30	3.91	143.49	305.68
92	2020-12-31	10.07	128.73	296.57

	Time	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
SI No.				
93	2021-01-01	8.78	135.31	317.66
94	2021-01-02	7.76	150.40	284.49
95	2021-01-03	7.61	135.50	257.16
96	2021-01-04	7.84	129.10	218.18
97	2021-01-05	5.93	128.32	250.06
98	2021-01-06	8.32	34.06	264.17
99	2021-01-07	5.84	22.12	98.81
100	2021-01-08	5.88	43.10	145.23
101	2021-01-09	3.94	145.35	272.78
102	2021-01-10	5.38	130.74	210.90
103	2021-01-11	6.58	130.55	206.37
104	2021-01-12	2.10	106.81	228.67
105	2021-01-13	1.59	97.05	230.68
106	2021-01-14	10.13	84.69	135.72
107	2021-01-15	6.97	70.34	235.38
108	2021-01-16	14.10	17.07	40.75
109	2021-01-17	3.06	16.50	39.80
110	2021-01-18	1.43	16.87	42.75
111	2021-01-19	1.30	18.08	47.84
112	2021-01-20	1.25	21.00	58.62
113	2021-01-21	1.28	22.85	62.44
114	2021-01-22	1.33	19.99	50.57
115	2021-01-23	21.71	22.71	56.74
116	2021-01-24	4.55	21.27	95.99
117	2021-01-25	10.47	24.62	164.30
118	2021-01-26	13.58	30.51	200.73

	Time	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
SI No.				
119	2021-01-27	0.41	31.71	198.59
120	2021-01-28	4.68	30.15	184.61
121	2021-01-29	2.55	28.06	170.28
122	2021-01-30	3.85	88.74	256.13
123	2021-01-31	9.40	133.19	267.14
124	2021-02-01	14.66	119.32	315.33
125	2021-02-02	14.08	123.81	288.23
126	2021-02-03	9.25	129.52	148.15
127	2021-02-04	2.79	120.36	165.89
128	2021-02-05	5.59	117.67	194.34
129	2021-02-06	7.31	114.51	216.04
130	2021-02-07	2.98	81.86	280.15
131	2021-02-08	1.46	30.53	48.93
132	2021-02-09	0.85	28.84	45.04
133	2021-02-10	0.83	28.97	45.67
134	2021-02-11	10.15	32.28	50.32
135	2021-02-12	21.51	30.54	59.73
136	2021-02-13	16.20	34.24	148.89
137	2021-02-14	18.29	34.50	148.57
138	2021-02-15	17.10	35.15	152.94
139	2021-02-16	11.32	35.97	160.11
140	2021-02-17	7.46	88.10	217.05
141	2021-02-18	11.12	158.70	237.50
142	2021-02-19	18.67	100.77	113.69
143	2021-02-20	7.50	36.19	53.58
144	2021-02-21	0.42	35.69	51.02

	Time	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
SI No.				
145	2021-02-22	7.15	97.05	97.67
146	2021-02-23	5.73	43.31	122.58
147	2021-02-24	7.64	38.60	104.03
148	2021-02-25	0.46	39.12	96.47
149	2021-02-26	7.80	50.91	147.36
150	2021-02-27	7.29	113.81	351.73
151	2021-02-28	4.46	111.32	344.94
152	2021-03-01	5.82	124.82	307.45
153	2021-03-02	4.70	124.59	295.81
154	2021-03-03	6.92	129.99	306.78
155	2021-03-04	8.94	130.99	298.30
156	2021-03-05	8.62	136.43	249.90
157	2021-03-06	9.93	126.19	256.92
158	2021-03-07	5.03	136.83	246.48
159	2021-03-08	4.96	147.88	235.14
160	2021-03-09	17.12	91.28	188.46
161	2021-03-10	24.51	40.13	74.21
162	2021-03-11	2.95	39.35	71.75
163	2021-03-12	1.28	38.39	69.00
164	2021-03-13	1.25	41.32	72.02
165	2021-03-14	27.73	87.71	165.87
166	2021-03-15	18.30	130.75	298.17
167	2021-03-16	6.90	143.12	281.86
168	2021-03-17	8.10	148.40	285.49
169	2021-03-18	9.95	146.57	285.10
170	2021-03-19	7.52	142.42	281.89

	Time	CEMS_2-PM_U	CEMS_2-NOx_U	CEMS_2-SO2_U
SI No.				
171	2021-03-20	3.59	130.92	301.56
172	2021-03-21	6.02	141.12	318.26
173	2021-03-22	6.87	152.26	296.44
174	2021-03-23	4.20	152.87	279.97
175	2021-03-24	3.54	174.90	237.46
176	2021-03-25	5.17	172.84	249.10
177	2021-03-26	5.12	164.55	259.01
178	2021-03-27	6.65	165.64	271.85
179	2021-03-28	9.27	164.98	250.94
180	2021-03-29	25.45	50.18	110.02
181	2021-03-30	7.31	51.18	111.82
182	2021-03-31	1.42	50.74	111.66

**Report Details:** JSPLAngul | 2021-05-25 14:08:36 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
Prescribed Standards	0 - 100	0 -	0 -
Maximum Data	83.46	999.8	999.89
Minimum Data	0.11	0.0	0.11
Geometric Mean	9.56	117.98	207.77
Median	7.4	92.29	211.8
Standard Deviation	10.38	159.77	172.49
Maximum Value At Time	2020-12-22	2020-10-04	2020-10-04
Minimum Value At Time	2020-12-20	2020-12-17	2020-10-17
Valid Data Points	169	169	169
Total Data Points	182	182	182
Data Availability %	92.86%	92.86%	92.86%

	Time	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
Sl No.				
1	2020-10-01	0.33	58.32	105.21
2	2020-10-02	0.31	61.53	113.84
3	2020-10-03	0.49	400.49	434.83
4	2020-10-04	0.36	999.80	999.89
5	2020-10-05	0.31	999.79	999.88
6	2020-10-06	0.32	999.77	999.88
7	2020-10-07	0.42	999.76	999.87
8	2020-10-08	0.49	487.24	487.31
9	2020-10-09	0.30	0.11	0.16
10	2020-10-10	0.34	0.12	0.17
11	2020-10-11	0.41	0.12	0.17
12	2020-10-12	0.29	0.11	0.16
13	2020-10-13	0.30	0.12	0.17
14	2020-10-14	1.21	0.11	0.16

	Time	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
SI No.				
15	2020-10-15	1.14	0.10	0.14
16	2020-10-16	0.29	0.08	0.13
17	2020-10-17	0.30	0.07	0.11
18	2020-10-18	0.28	0.08	0.12
19	2020-10-19	0.29	0.10	0.15
20	2020-10-20	0.28	0.11	0.17
21	2020-10-21	0.29	0.11	0.16
22	2020-10-22	0.35	0.10	0.16
23	2020-10-23	0.28	0.09	0.14
24	2020-10-24	0.30	0.10	0.14
25	2020-10-25	0.28	0.09	0.14
26	2020-10-26	0.28	0.10	0.14
27	2020-10-27	0.27	0.10	0.15
28	2020-10-28	0.28	0.08	0.13
29	2020-10-29	0.28	0.07	0.12
30	2020-10-30	0.29	0.07	0.11
31	2020-10-31	0.26	0.07	0.12
32	2020-11-01	0.27	0.07	0.11
33	2020-11-02	0.24	0.07	0.11
34	2020-11-03	0.25	2.77	0.11
35	2020-11-04	0.89	16.93	52.81
36	2020-11-05	1.78	19.58	101.62
37	2020-11-06	1.93	22.02	103.75
38	2020-11-07	3.34	22.06	93.75
39	2020-11-08	1.94	20.62	81.15
40	2020-11-09	1.99	19.08	72.32

	Time	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
SI No.				
41	2020-11-10	1.66	19.44	73.02
42	2020-11-11	2.11	23.34	89.72
43	2020-11-12	1.99	26.53	95.64
44	2020-11-13	1.81	29.17	98.12
45	2020-11-14	1.81	30.65	102.72
46	2020-11-15	1.96	32.27	107.91
47	2020-11-16	1.99	34.26	111.80
48	2020-11-17	2.22	36.02	115.68
49	2020-11-18	1.95	38.76	125.20
50	2020-11-19	1.64	40.32	127.01
51	2020-11-20	2.14	41.05	127.76
52	2020-11-21	1.53	40.01	116.67
53	2020-11-22	2.17	44.36	139.99
54	2020-11-23	2.15	44.29	132.21
55	2020-11-24	2.06	42.91	124.06
56	2020-11-25	2.07	40.56	110.77
57	2020-11-26	2.08	42.28	123.45
58	2020-11-27	1.98	44.95	134.78
59	2020-11-28	2.23	46.39	136.31
60	2020-11-29	1.87	45.30	126.73
61	2020-11-30	1.47	45.57	126.45
62	2020-12-01	NA	NA	NA
63	2020-12-02	NA	NA	NA
64	2020-12-03	NA	NA	NA
65	2020-12-04	NA	NA	NA
66	2020-12-05	NA	NA	NA



	Time	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
SI No.				
67	2020-12-06	NA	NA	NA
68	2020-12-07	NA	NA	NA
69	2020-12-08	NA	NA	NA
70	2020-12-09	NA	NA	NA
71	2020-12-10	NA	NA	NA
72	2020-12-11	NA	NA	NA
73	2020-12-12	NA	NA	NA
74	2020-12-13	NA	NA	NA
75	2020-12-14	1.16	47.00	139.56
76	2020-12-15	1.73	70.66	215.23
77	2020-12-16	0.84	39.07	115.50
78	2020-12-17	0.12	0.00	0.14
79	2020-12-18	0.12	0.00	0.24
80	2020-12-19	0.12	0.00	0.24
81	2020-12-20	0.11	0.00	0.17
82	2020-12-21	16.95	12.27	114.67
83	2020-12-22	83.46	46.50	225.54
84	2020-12-23	28.43	40.36	214.80
85	2020-12-24	23.80	48.22	254.84
86	2020-12-25	19.99	41.44	211.80
87	2020-12-26	17.84	37.93	218.75
88	2020-12-27	23.74	43.84	235.92
89	2020-12-28	15.78	43.17	211.45
90	2020-12-29	4.18	40.45	194.12
91	2020-12-30	18.58	42.62	197.42
92	2020-12-31	2.72	44.40	198.52

	Time	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
SI No.				
93	2021-01-01	13.51	52.40	234.88
94	2021-01-02	6.63	77.48	331.65
95	2021-01-03	12.94	73.67	340.55
96	2021-01-04	8.67	67.07	295.23
97	2021-01-05	18.67	69.52	252.79
98	2021-01-06	17.55	73.73	140.08
99	2021-01-07	9.65	73.56	221.99
100	2021-01-08	6.54	79.40	299.25
101	2021-01-09	9.33	81.12	293.45
102	2021-01-10	14.20	82.69	276.66
103	2021-01-11	4.97	85.83	235.84
104	2021-01-12	9.42	99.66	258.69
105	2021-01-13	9.02	104.06	259.28
106	2021-01-14	27.58	100.56	266.00
107	2021-01-15	8.90	92.29	279.31
108	2021-01-16	8.92	97.54	318.69
109	2021-01-17	8.63	112.69	356.93
110	2021-01-18	5.58	106.69	311.00
111	2021-01-19	6.24	105.25	299.38
112	2021-01-20	6.60	119.05	288.69
113	2021-01-21	9.88	120.37	269.70
114	2021-01-22	11.08	113.00	270.29
115	2021-01-23	10.25	119.88	301.60
116	2021-01-24	6.35	134.48	327.51
117	2021-01-25	7.40	113.45	261.19
118	2021-01-26	11.54	148.99	357.83

	Time	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
SI No.				
119	2021-01-27	11.95	155.20	337.40
120	2021-01-28	12.07	153.58	343.56
121	2021-01-29	8.89	141.26	343.90
122	2021-01-30	12.72	130.80	277.02
123	2021-01-31	12.00	112.50	183.11
124	2021-02-01	11.97	108.95	164.24
125	2021-02-02	13.72	111.75	168.34
126	2021-02-03	15.99	113.95	171.17
127	2021-02-04	11.67	114.71	172.67
128	2021-02-05	13.00	117.70	178.96
129	2021-02-06	11.26	121.63	192.77
130	2021-02-07	7.88	118.84	181.72
131	2021-02-08	11.96	130.41	203.04
132	2021-02-09	12.29	126.76	189.43
133	2021-02-10	12.55	130.52	195.57
134	2021-02-11	11.80	135.24	205.18
135	2021-02-12	10.86	142.59	215.25
136	2021-02-13	6.64	145.65	220.48
137	2021-02-14	5.28	149.08	223.12
138	2021-02-15	27.15	155.50	224.54
139	2021-02-16	24.82	158.99	231.97
140	2021-02-17	24.87	158.52	227.17
141	2021-02-18	23.23	158.22	226.30
142	2021-02-19	23.14	163.46	240.99
143	2021-02-20	15.07	163.28	239.61
144	2021-02-21	12.77	165.79	246.12

	Time	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
SI No.				
145	2021-02-22	22.49	173.34	258.62
146	2021-02-23	21.96	183.03	275.30
147	2021-02-24	19.32	191.91	278.30
148	2021-02-25	15.32	195.20	279.02
149	2021-02-26	16.41	192.72	277.29
150	2021-02-27	23.11	189.80	275.93
151	2021-02-28	6.93	190.49	271.31
152	2021-03-01	2.75	196.22	280.68
153	2021-03-02	0.52	193.53	268.87
154	2021-03-03	0.34	204.02	282.72
155	2021-03-04	11.46	191.69	259.83
156	2021-03-05	20.86	200.21	291.81
157	2021-03-06	23.88	208.34	304.13
158	2021-03-07	22.92	164.70	220.46
159	2021-03-08	21.98	168.73	368.18
160	2021-03-09	21.22	180.13	384.06
161	2021-03-10	17.05	185.84	408.47
162	2021-03-11	15.00	192.44	226.53
163	2021-03-12	4.96	181.81	180.55
164	2021-03-13	13.43	188.25	214.69
165	2021-03-14	26.93	187.59	215.01
166	2021-03-15	24.91	198.99	261.23
167	2021-03-16	23.56	202.54	252.62
168	2021-03-17	16.64	207.02	219.74
169	2021-03-18	12.84	210.37	202.92
170	2021-03-19	12.15	215.77	193.45

	Time	CEMS_4-PM_U	CEMS_4-NOx_U	CEMS_4-SO2_U
SI No.				
171	2021-03-20	25.77	219.52	181.68
172	2021-03-21	23.35	201.22	191.78
173	2021-03-22	38.45	181.76	292.10
174	2021-03-23	12.32	184.02	381.63
175	2021-03-24	16.63	188.14	372.68
176	2021-03-25	16.25	190.47	362.77
177	2021-03-26	22.72	192.51	401.38
178	2021-03-27	18.30	196.29	412.85
179	2021-03-28	11.42	194.67	406.85
180	2021-03-29	16.28	196.94	405.40
181	2021-03-30	13.67	196.62	387.88
182	2021-03-31	20.46	194.53	366.95

**Report Details:** JSPLAngul | 2021-05-25 14:10:16 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
Prescribed Standards	0 - 100	0 -	0 -
Maximum Data	103.2	223.37	470.11
Minimum Data	0.06	1.01	0.0
Geometric Mean	19.87	103.63	221.21
Median	13.09	88.14	249.62
Standard Deviation	18.5	63.26	93.83
Maximum Value At Time	2020-10-15	2020-12-01	2021-03-26
Minimum Value At Time	2020-12-07	2021-03-12	2020-11-06
Valid Data Points	166	166	166
Total Data Points	182	182	182
Data Availability %	91.21%	91.21%	91.21%

	Time	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
Sl No.				
1	2020-10-01	13.22	154.84	264.61
2	2020-10-02	11.60	156.40	254.02
3	2020-10-03	13.08	156.40	254.02
4	2020-10-04	13.25	156.40	254.01
5	2020-10-05	12.76	156.40	254.01
6	2020-10-06	5.63	156.37	254.12
7	2020-10-07	1.36	156.40	254.01
8	2020-10-08	0.79	156.40	254.03
9	2020-10-09	1.36	156.40	254.01
10	2020-10-10	1.35	156.40	254.02
11	2020-10-11	0.54	156.40	254.02
12	2020-10-12	0.56	156.40	254.01
13	2020-10-13	0.53	156.40	254.01
14	2020-10-14	71.77	156.44	254.02

	Time	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
SI No.				
15	2020-10-15	103.20	156.39	254.04
16	2020-10-16	70.98	156.40	254.06
17	2020-10-17	73.59	156.41	254.08
18	2020-10-18	86.82	156.40	254.06
19	2020-10-19	27.98	156.38	254.02
20	2020-10-20	17.53	156.38	254.02
21	2020-10-21	12.26	156.38	254.02
22	2020-10-22	8.90	156.38	254.02
23	2020-10-23	NA	NA	NA
24	2020-10-24	NA	NA	NA
25	2020-10-25	NA	NA	NA
26	2020-10-26	NA	NA	NA
27	2020-10-27	NA	NA	NA
28	2020-10-28	NA	NA	NA
29	2020-10-29	NA	NA	NA
30	2020-10-30	NA	NA	NA
31	2020-10-31	NA	NA	NA
32	2020-11-01	NA	NA	NA
33	2020-11-02	NA	NA	NA
34	2020-11-03	NA	NA	NA
35	2020-11-04	NA	NA	NA
36	2020-11-05	NA	NA	NA
37	2020-11-06	7.26	1.05	0.00
38	2020-11-07	13.09	75.47	110.75
39	2020-11-08	14.10	156.38	249.61
40	2020-11-09	13.23	156.38	249.61

	Time	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
SI No.				
41	2020-11-10	6.74	156.38	249.61
42	2020-11-11	2.36	156.38	249.61
43	2020-11-12	6.33	156.38	249.62
44	2020-11-13	12.86	156.38	249.62
45	2020-11-14	14.06	156.38	249.62
46	2020-11-15	13.09	156.38	249.62
47	2020-11-16	13.51	156.38	249.62
48	2020-11-17	13.09	156.38	249.62
49	2020-11-18	13.27	156.38	249.62
50	2020-11-19	12.26	156.38	249.62
51	2020-11-20	12.35	156.38	249.62
52	2020-11-21	13.19	156.39	249.63
53	2020-11-22	13.71	156.38	249.62
54	2020-11-23	5.81	156.38	249.62
55	2020-11-24	3.46	156.38	249.61
56	2020-11-25	2.58	156.43	249.62
57	2020-11-26	0.56	156.38	249.61
58	2020-11-27	19.86	156.38	244.45
59	2020-11-28	39.47	156.38	240.90
60	2020-11-29	54.61	156.39	240.97
61	2020-11-30	46.38	209.32	271.87
62	2020-12-01	36.18	223.37	278.39
63	2020-12-02	99.23	189.00	288.07
64	2020-12-03	NA	NA	NA
65	2020-12-04	12.88	201.22	241.12
66	2020-12-05	7.58	183.90	299.48



	Time	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
SI No.				
67	2020-12-06	0.43	189.79	286.42
68	2020-12-07	0.06	168.30	296.47
69	2020-12-08	12.72	186.45	293.74
70	2020-12-09	23.81	202.90	273.38
71	2020-12-10	75.29	214.51	236.54
72	2020-12-11	17.44	214.51	236.53
73	2020-12-12	NA	NA	NA
74	2020-12-13	36.67	214.51	236.54
75	2020-12-14	23.44	214.56	236.51
76	2020-12-15	33.26	214.50	227.73
77	2020-12-16	47.20	214.55	228.32
78	2020-12-17	18.14	214.51	228.32
79	2020-12-18	28.16	214.54	228.22
80	2020-12-19	39.25	214.66	228.29
81	2020-12-20	39.09	214.72	228.30
82	2020-12-21	39.01	214.74	228.27
83	2020-12-22	14.92	214.78	228.33
84	2020-12-23	5.04	177.94	270.94
85	2020-12-24	17.17	102.08	378.65
86	2020-12-25	1.56	82.12	253.86
87	2020-12-26	10.92	82.24	253.76
88	2020-12-27	3.22	41.72	125.94
89	2020-12-28	25.21	27.17	181.68
90	2020-12-29	32.03	26.19	173.59
91	2020-12-30	23.10	30.84	166.70
92	2020-12-31	20.64	46.92	217.79

	Time	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
SI No.				
93	2021-01-01	18.84	50.99	261.95
94	2021-01-02	17.98	55.00	258.62
95	2021-01-03	17.44	56.73	275.92
96	2021-01-04	11.06	59.96	280.12
97	2021-01-05	10.10	52.33	342.40
98	2021-01-06	12.75	54.28	348.59
99	2021-01-07	15.16	66.63	300.37
100	2021-01-08	13.96	67.92	158.84
101	2021-01-09	11.92	74.97	182.88
102	2021-01-10	12.62	69.38	203.32
103	2021-01-11	11.75	64.36	197.52
104	2021-01-12	12.10	56.02	225.62
105	2021-01-13	9.90	57.47	264.14
106	2021-01-14	5.91	80.61	249.18
107	2021-01-15	8.50	80.87	261.91
108	2021-01-16	6.58	85.04	267.33
109	2021-01-17	2.92	80.06	242.41
110	2021-01-18	6.75	73.26	245.50
111	2021-01-19	9.69	79.23	278.23
112	2021-01-20	10.02	80.02	244.15
113	2021-01-21	10.09	94.13	249.29
114	2021-01-22	9.21	87.25	263.77
115	2021-01-23	6.59	78.56	254.64
116	2021-01-24	5.39	82.42	235.17
117	2021-01-25	5.15	74.24	241.58
118	2021-01-26	17.69	39.94	108.99

	Time	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
SI No.				
119	2021-01-27	55.57	15.70	8.48
120	2021-01-28	58.37	17.25	9.44
121	2021-01-29	58.37	18.23	10.90
122	2021-01-30	41.50	25.88	21.48
123	2021-01-31	7.74	20.71	12.91
124	2021-02-01	10.04	22.83	24.94
125	2021-02-02	18.78	63.72	248.86
126	2021-02-03	22.72	87.46	302.06
127	2021-02-04	33.03	71.86	306.85
128	2021-02-05	9.98	80.58	304.47
129	2021-02-06	11.82	77.65	306.73
130	2021-02-07	7.74	74.04	367.62
131	2021-02-08	7.72	22.04	15.12
132	2021-02-09	14.69	73.37	217.46
133	2021-02-10	23.32	88.66	320.84
134	2021-02-11	22.62	93.99	326.17
135	2021-02-12	7.73	106.11	300.59
136	2021-02-13	9.16	106.39	262.38
137	2021-02-14	29.87	100.23	258.17
138	2021-02-15	33.03	42.40	58.64
139	2021-02-16	33.02	26.81	13.25
140	2021-02-17	33.03	32.08	13.33
141	2021-02-18	32.76	87.62	203.67
142	2021-02-19	33.02	102.21	278.71
143	2021-02-20	33.03	103.39	258.78
144	2021-02-21	32.55	113.53	254.67

	Time	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
SI No.				
145	2021-02-22	31.01	128.90	215.28
146	2021-02-23	33.04	129.87	205.19
147	2021-02-24	23.10	103.43	225.24
148	2021-02-25	7.73	90.30	187.19
149	2021-02-26	7.73	80.86	105.73
150	2021-02-27	9.06	91.48	161.75
151	2021-02-28	9.43	93.18	185.21
152	2021-03-01	33.04	93.41	161.05
153	2021-03-02	29.09	44.16	89.42
154	2021-03-03	9.52	24.96	139.82
155	2021-03-04	7.74	45.06	328.78
156	2021-03-05	9.21	57.07	341.83
157	2021-03-06	7.74	61.59	307.82
158	2021-03-07	7.73	64.42	334.31
159	2021-03-08	7.74	63.58	348.11
160	2021-03-09	10.89	14.59	105.58
161	2021-03-10	33.03	17.47	108.75
162	2021-03-11	33.03	1.02	67.77
163	2021-03-12	33.03	1.01	68.16
164	2021-03-13	33.03	1.03	68.24
165	2021-03-14	33.03	1.10	68.25
166	2021-03-15	33.03	1.05	68.27
167	2021-03-16	21.17	23.75	167.62
168	2021-03-17	7.74	59.03	314.70
169	2021-03-18	8.32	31.17	128.96
170	2021-03-19	7.73	11.95	19.56

	Time	CEMS_5-PM_U	CEMS_5-NOx_U	CEMS_5-SO2_U
SI No.				
171	2021-03-20	7.74	11.95	19.57
172	2021-03-21	7.73	11.94	19.53
173	2021-03-22	9.67	11.94	19.67
174	2021-03-23	22.27	11.89	20.85
175	2021-03-24	7.73	29.45	29.63
176	2021-03-25	14.43	49.18	155.72
177	2021-03-26	33.03	60.20	470.11
178	2021-03-27	31.51	63.86	429.70
179	2021-03-28	27.89	58.90	400.44
180	2021-03-29	17.09	63.36	358.17
181	2021-03-30	7.08	60.70	315.72
182	2021-03-31	4.55	55.44	307.61

**Report Details:** JSPLAngul | 2021-05-25 14:10:50 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
Prescribed Standards	0 - 100	0 -	0 -
Maximum Data	78.2	1151.17	219.33
Minimum Data	0.0	0.0	0.0
Geometric Mean	14.43	352.77	114.72
Median	8.1	288.15	120.14
Standard Deviation	20.84	246.97	53.92
Maximum Value At Time	2020-10-23	2020-11-19	2020-12-06
Minimum Value At Time	2020-11-08	2020-11-08	2020-11-04
Valid Data Points	180	180	180
Total Data Points	182	182	182
Data Availability %	98.9%	98.9%	98.9%

	Time	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
Sl No.				
1	2020-10-01	10.72	418.97	136.06
2	2020-10-02	4.78	271.16	114.81
3	2020-10-03	7.67	325.03	136.37
4	2020-10-04	9.14	301.59	127.61
5	2020-10-05	13.84	372.03	126.39
6	2020-10-06	15.18	403.43	125.06
7	2020-10-07	14.51	398.86	129.27
8	2020-10-08	15.45	404.64	142.94
9	2020-10-09	12.96	435.30	126.91
10	2020-10-10	15.20	424.21	120.83
11	2020-10-11	16.60	400.77	147.28
12	2020-10-12	15.49	417.24	134.80
13	2020-10-13	8.93	355.68	170.14
14	2020-10-14	7.07	453.51	145.73

	Time	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
SI No.				
15	2020-10-15	9.81	491.07	114.94
16	2020-10-16	5.72	347.82	108.63
17	2020-10-17	5.22	345.55	127.79
18	2020-10-18	8.16	356.04	135.86
19	2020-10-19	7.69	359.16	116.23
20	2020-10-20	5.13	409.73	93.96
21	2020-10-21	4.88	425.58	86.00
22	2020-10-22	45.81	310.22	106.03
23	2020-10-23	78.20	254.05	119.66
24	2020-10-24	78.20	254.05	125.13
25	2020-10-25	78.20	254.04	124.62
26	2020-10-26	78.19	254.02	130.29
27	2020-10-27	78.19	254.02	76.99
28	2020-10-28	78.19	254.02	45.65
29	2020-10-29	78.20	254.03	46.55
30	2020-10-30	78.20	254.04	46.93
31	2020-10-31	78.20	250.90	47.00
32	2020-11-01	78.20	249.64	50.22
33	2020-11-02	78.20	249.64	46.59
34	2020-11-03	78.20	249.63	34.12
35	2020-11-04	78.20	249.63	0.00
36	2020-11-05	78.20	249.63	0.00
37	2020-11-06	78.19	249.62	0.00
38	2020-11-07	43.50	138.86	0.00
39	2020-11-08	0.00	0.00	0.00
40	2020-11-09	0.00	0.00	0.00

	Time	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
SI No.				
41	2020-11-10	0.00	0.00	0.00
42	2020-11-11	0.00	0.00	0.00
43	2020-11-12	0.00	79.18	20.63
44	2020-11-13	0.00	1043.92	188.89
45	2020-11-14	0.00	1015.63	186.06
46	2020-11-15	0.00	976.21	182.12
47	2020-11-16	0.00	995.56	184.06
48	2020-11-17	0.00	1070.08	191.52
49	2020-11-18	0.00	1009.34	185.44
50	2020-11-19	0.00	1151.17	199.62
51	2020-11-20	0.00	1059.69	190.47
52	2020-11-21	0.00	1027.93	187.31
53	2020-11-22	0.00	965.06	181.01
54	2020-11-23	0.00	822.09	166.70
55	2020-11-24	0.00	943.94	178.90
56	2020-11-25	0.00	923.32	176.83
57	2020-11-26	0.00	972.91	181.79
58	2020-11-27	0.00	926.10	177.12
59	2020-11-28	0.00	906.59	175.17
60	2020-11-29	0.00	961.58	180.67
61	2020-11-30	0.00	1053.94	189.90
62	2020-12-01	0.00	775.04	194.61
63	2020-12-02	0.00	603.84	206.01
64	2020-12-03	NA	NA	NA
65	2020-12-04	0.00	474.94	193.88
66	2020-12-05	0.00	454.01	214.08



	Time	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
SI No.				
67	2020-12-06	0.00	443.54	219.33
68	2020-12-07	0.00	441.09	193.75
69	2020-12-08	0.00	427.38	173.89
70	2020-12-09	0.00	366.39	162.55
71	2020-12-10	0.00	485.98	174.52
72	2020-12-11	0.00	485.97	174.49
73	2020-12-12	NA	NA	NA
74	2020-12-13	0.00	0.00	0.00
75	2020-12-14	5.41	0.00	0.00
76	2020-12-15	1.70	0.00	0.00
77	2020-12-16	8.16	188.97	67.86
78	2020-12-17	15.16	485.88	174.51
79	2020-12-18	6.88	485.87	174.51
80	2020-12-19	8.46	485.87	174.70
81	2020-12-20	7.91	485.89	174.87
82	2020-12-21	8.09	485.87	174.90
83	2020-12-22	10.44	502.41	174.95
84	2020-12-23	16.90	390.85	198.16
85	2020-12-24	18.63	427.74	203.66
86	2020-12-25	18.29	244.70	196.58
87	2020-12-26	10.60	323.53	196.13
88	2020-12-27	11.76	85.91	83.85
89	2020-12-28	13.55	183.56	54.25
90	2020-12-29	9.67	353.40	111.41
91	2020-12-30	16.51	342.45	109.75
92	2020-12-31	22.21	341.39	116.43

	Time	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
SI No.				
93	2021-01-01	26.82	318.54	107.08
94	2021-01-02	18.33	279.42	124.25
95	2021-01-03	15.39	308.46	115.16
96	2021-01-04	12.83	286.77	120.61
97	2021-01-05	4.83	288.62	102.54
98	2021-01-06	7.13	301.52	98.10
99	2021-01-07	8.86	262.52	129.38
100	2021-01-08	8.09	256.23	131.46
101	2021-01-09	6.81	238.56	140.53
102	2021-01-10	4.24	226.77	129.43
103	2021-01-11	4.96	238.55	123.05
104	2021-01-12	3.51	267.76	99.94
105	2021-01-13	6.39	287.68	77.65
106	2021-01-14	5.12	264.68	126.15
107	2021-01-15	4.77	280.36	123.44
108	2021-01-16	6.64	316.97	130.38
109	2021-01-17	4.77	305.68	128.96
110	2021-01-18	5.35	280.98	133.78
111	2021-01-19	4.94	317.38	131.17
112	2021-01-20	8.28	329.86	141.09
113	2021-01-21	6.89	318.88	164.64
114	2021-01-22	5.09	335.51	164.07
115	2021-01-23	7.82	363.84	144.46
116	2021-01-24	13.54	145.58	56.39
117	2021-01-25	10.61	263.81	113.04
118	2021-01-26	23.92	229.52	134.86

	Time	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
SI No.				
119	2021-01-27	20.03	180.07	166.90
120	2021-01-28	5.87	226.16	153.20
121	2021-01-29	6.98	243.64	143.17
122	2021-01-30	3.78	173.29	95.19
123	2021-01-31	9.34	1.96	23.23
124	2021-02-01	9.29	5.61	22.45
125	2021-02-02	13.83	108.36	36.78
126	2021-02-03	21.97	7.26	24.56
127	2021-02-04	1.93	8.77	25.46
128	2021-02-05	8.12	115.89	62.66
129	2021-02-06	3.20	246.99	70.06
130	2021-02-07	0.69	441.90	117.56
131	2021-02-08	10.32	352.85	128.63
132	2021-02-09	11.87	317.14	143.13
133	2021-02-10	10.71	319.81	141.92
134	2021-02-11	15.99	308.38	155.18
135	2021-02-12	8.78	303.45	164.17
136	2021-02-13	3.46	333.53	134.13
137	2021-02-14	3.41	261.80	118.19
138	2021-02-15	10.60	76.08	64.67
139	2021-02-16	5.52	76.06	64.61
140	2021-02-17	0.41	76.07	64.56
141	2021-02-18	0.47	76.08	64.65
142	2021-02-19	8.42	76.09	64.54
143	2021-02-20	8.76	76.07	64.55
144	2021-02-21	13.08	83.10	64.77

	Time	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
SI No.				
145	2021-02-22	6.47	255.02	100.80
146	2021-02-23	5.03	345.99	133.23
147	2021-02-24	6.37	312.67	159.99
148	2021-02-25	2.04	270.18	145.68
149	2021-02-26	2.02	270.46	145.49
150	2021-02-27	2.77	277.03	142.50
151	2021-02-28	3.76	278.91	130.74
152	2021-03-01	8.75	252.96	139.56
153	2021-03-02	3.69	124.68	67.27
154	2021-03-03	2.30	265.17	97.59
155	2021-03-04	4.37	264.10	89.06
156	2021-03-05	3.00	263.61	73.16
157	2021-03-06	5.20	255.35	74.97
158	2021-03-07	4.39	260.32	80.81
159	2021-03-08	5.31	260.38	80.80
160	2021-03-09	15.74	260.17	80.60
161	2021-03-10	45.11	260.35	80.74
162	2021-03-11	23.05	260.42	80.62
163	2021-03-12	9.03	259.91	80.80
164	2021-03-13	5.41	268.99	80.77
165	2021-03-14	19.37	263.28	82.91
166	2021-03-15	12.53	249.80	93.71
167	2021-03-16	17.89	254.58	93.18
168	2021-03-17	14.48	286.43	88.70
169	2021-03-18	12.44	350.89	87.47
170	2021-03-19	22.31	357.60	85.75

	Time	CEMS_6-PM_U	CEMS_6-SO2_U	CEMS_6-NOx_U
SI No.				
171	2021-03-20	22.46	397.02	75.84
172	2021-03-21	21.18	319.88	96.90
173	2021-03-22	25.93	314.87	90.12
174	2021-03-23	18.78	345.34	85.77
175	2021-03-24	14.35	291.08	106.65
176	2021-03-25	14.28	278.85	111.58
177	2021-03-26	12.89	275.58	110.75
178	2021-03-27	11.68	273.08	104.56
179	2021-03-28	12.88	296.93	101.58
180	2021-03-29	12.82	294.12	102.58
181	2021-03-30	14.84	273.43	108.16
182	2021-03-31	13.62	274.92	102.56

**Report Details:** JSPLAngul | 2021-05-25 14:11:36 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
Prescribed Standards	0 - 100	0 -	0 -
Maximum Data	36.94	128.77	375.45
Minimum Data	0.06	1.15	0.57
Geometric Mean	14.65	56.99	156.5
Median	14.26	39.78	136.86
Standard Deviation	11.71	38.23	96.57
Maximum Value At Time	2020-10-15	2021-03-06	2021-01-01
Minimum Value At Time	2021-02-12	2020-11-21	2020-11-30
Valid Data Points	169	169	169
Total Data Points	182	182	182
Data Availability %	92.86%	92.86%	92.86%

	Time	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
Sl No.				
1	2020-10-01	25.25	39.75	267.00
2	2020-10-02	20.77	39.72	267.00
3	2020-10-03	21.55	39.70	267.00
4	2020-10-04	23.75	39.75	267.00
5	2020-10-05	21.96	39.75	267.00
6	2020-10-06	22.33	39.75	267.00
7	2020-10-07	20.82	39.75	267.01
8	2020-10-08	21.53	39.57	266.88
9	2020-10-09	21.46	39.38	266.52
10	2020-10-10	21.80	39.39	266.50
11	2020-10-11	20.53	39.39	266.52
12	2020-10-12	23.28	39.53	266.77
13	2020-10-13	24.80	39.72	267.00
14	2020-10-14	34.19	39.76	267.00

	Time	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
SI No.				
15	2020-10-15	36.94	39.78	267.00
16	2020-10-16	36.94	39.75	267.00
17	2020-10-17	36.94	39.72	267.00
18	2020-10-18	36.94	39.73	267.00
19	2020-10-19	36.94	39.77	267.00
20	2020-10-20	36.94	39.79	267.00
21	2020-10-21	36.94	39.81	267.00
22	2020-10-22	36.94	39.78	267.00
23	2020-10-23	36.94	39.75	267.00
24	2020-10-24	36.94	39.75	267.00
25	2020-10-25	36.94	39.75	267.00
26	2020-10-26	36.94	39.76	267.00
27	2020-10-27	36.94	39.78	267.00
28	2020-10-28	36.94	39.77	267.00
29	2020-10-29	36.94	40.61	200.84
30	2020-10-30	36.94	3.77	35.61
31	2020-10-31	36.94	4.16	35.62
32	2020-11-01	36.94	4.80	35.50
33	2020-11-02	36.94	5.59	36.56
34	2020-11-03	36.94	7.12	44.06
35	2020-11-04	27.86	19.62	79.53
36	2020-11-05	14.26	27.97	124.74
37	2020-11-06	11.50	27.94	125.24
38	2020-11-07	11.35	27.95	125.50
39	2020-11-08	11.49	28.00	125.62
40	2020-11-09	11.49	28.04	125.62

	Time	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
SI No.				
41	2020-11-10	12.42	28.04	125.62
42	2020-11-11	11.88	28.01	125.63
43	2020-11-12	12.47	27.95	131.93
44	2020-11-13	19.72	27.99	137.50
45	2020-11-14	21.75	28.05	137.72
46	2020-11-15	21.19	28.06	138.14
47	2020-11-16	21.63	28.06	138.14
48	2020-11-17	21.95	28.06	138.14
49	2020-11-18	21.95	13.95	65.92
50	2020-11-19	16.76	1.25	0.61
51	2020-11-20	14.00	1.26	0.62
52	2020-11-21	12.22	1.15	0.61
53	2020-11-22	12.52	1.17	0.61
54	2020-11-23	14.30	1.19	0.62
55	2020-11-24	16.19	1.20	0.61
56	2020-11-25	15.38	1.23	0.60
57	2020-11-26	16.87	1.24	0.59
58	2020-11-27	18.51	1.24	0.58
59	2020-11-28	19.69	1.22	0.58
60	2020-11-29	19.04	1.21	0.58
61	2020-11-30	18.87	1.21	0.57
62	2020-12-01	NA	NA	NA
63	2020-12-02	NA	NA	NA
64	2020-12-03	NA	NA	NA
65	2020-12-04	NA	NA	NA
66	2020-12-05	NA	NA	NA



	Time	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
SI No.				
67	2020-12-06	NA	NA	NA
68	2020-12-07	NA	NA	NA
69	2020-12-08	NA	NA	NA
70	2020-12-09	NA	NA	NA
71	2020-12-10	NA	NA	NA
72	2020-12-11	NA	NA	NA
73	2020-12-12	NA	NA	NA
74	2020-12-13	NA	NA	NA
75	2020-12-14	11.60	14.08	40.91
76	2020-12-15	11.96	1.23	0.61
77	2020-12-16	11.98	19.89	59.06
78	2020-12-17	12.69	43.83	132.61
79	2020-12-18	11.40	43.90	132.62
80	2020-12-19	11.53	44.03	132.62
81	2020-12-20	11.25	44.02	132.60
82	2020-12-21	11.81	51.30	141.18
83	2020-12-22	12.19	85.47	240.91
84	2020-12-23	11.77	86.27	210.64
85	2020-12-24	12.04	85.11	294.31
86	2020-12-25	9.83	86.34	310.39
87	2020-12-26	10.12	84.35	303.47
88	2020-12-27	12.38	99.32	299.17
89	2020-12-28	12.68	97.49	324.06
90	2020-12-29	12.06	88.13	365.83
91	2020-12-30	12.98	92.88	354.26
92	2020-12-31	13.29	108.74	347.77

	Time	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
SI No.				
93	2021-01-01	13.44	98.41	375.45
94	2021-01-02	16.55	79.46	188.13
95	2021-01-03	9.53	100.34	232.35
96	2021-01-04	4.73	104.07	199.56
97	2021-01-05	11.42	104.06	234.13
98	2021-01-06	12.55	89.37	199.46
99	2021-01-07	10.56	24.86	14.75
100	2021-01-08	13.39	24.34	13.75
101	2021-01-09	19.13	24.36	13.75
102	2021-01-10	19.14	24.37	13.75
103	2021-01-11	19.22	24.39	13.75
104	2021-01-12	19.42	24.39	13.75
105	2021-01-13	19.16	24.40	13.75
106	2021-01-14	19.12	24.45	13.75
107	2021-01-15	19.26	24.64	44.37
108	2021-01-16	19.29	24.64	65.88
109	2021-01-17	19.29	24.69	65.93
110	2021-01-18	19.29	24.63	65.87
111	2021-01-19	19.29	24.59	65.83
112	2021-01-20	19.28	24.48	65.61
113	2021-01-21	19.44	24.50	65.66
114	2021-01-22	19.63	24.60	65.89
115	2021-01-23	19.69	24.62	65.93
116	2021-01-24	19.80	24.61	65.89
117	2021-01-25	19.92	24.54	65.64
118	2021-01-26	20.00	24.50	65.63

	Time	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
SI No.				
119	2021-01-27	20.00	24.50	65.60
120	2021-01-28	20.00	24.57	65.71
121	2021-01-29	20.07	24.60	65.75
122	2021-01-30	20.06	36.72	106.30
123	2021-01-31	19.37	48.99	114.95
124	2021-02-01	18.69	48.82	104.63
125	2021-02-02	19.10	51.30	116.53
126	2021-02-03	19.70	52.74	121.68
127	2021-02-04	19.82	53.79	121.75
128	2021-02-05	19.98	55.49	129.30
129	2021-02-06	19.79	57.86	141.76
130	2021-02-07	19.75	62.59	170.06
131	2021-02-08	19.73	62.91	163.59
132	2021-02-09	19.75	61.22	138.42
133	2021-02-10	19.83	62.81	145.23
134	2021-02-11	11.86	65.98	161.84
135	2021-02-12	0.06	67.47	171.69
136	2021-02-13	0.06	71.38	192.19
137	2021-02-14	0.06	74.07	199.41
138	2021-02-15	0.06	76.68	203.14
139	2021-02-16	0.06	78.38	203.40
140	2021-02-17	0.06	79.50	185.31
141	2021-02-18	0.06	79.94	184.23
142	2021-02-19	0.06	83.84	206.72
143	2021-02-20	0.06	84.32	190.31
144	2021-02-21	0.06	85.67	194.78

	Time	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
SI No.				
145	2021-02-22	0.06	89.59	214.46
146	2021-02-23	0.06	94.28	237.13
147	2021-02-24	0.06	97.56	240.14
148	2021-02-25	0.06	101.84	261.28
149	2021-02-26	0.06	106.46	282.91
150	2021-02-27	0.06	110.68	295.22
151	2021-02-28	0.06	111.13	262.41
152	2021-03-01	0.06	116.47	295.87
153	2021-03-02	0.06	114.09	248.22
154	2021-03-03	0.06	120.24	275.06
155	2021-03-04	0.06	118.25	227.24
156	2021-03-05	0.06	123.17	262.62
157	2021-03-06	0.06	128.77	284.63
158	2021-03-07	0.06	109.98	92.47
159	2021-03-08	0.06	111.20	118.77
160	2021-03-09	0.06	111.55	135.45
161	2021-03-10	0.06	111.65	136.26
162	2021-03-11	0.06	111.63	136.27
163	2021-03-12	0.06	111.70	136.70
164	2021-03-13	0.06	111.75	136.97
165	2021-03-14	0.06	111.73	136.64
166	2021-03-15	0.06	111.65	136.28
167	2021-03-16	0.06	111.61	136.27
168	2021-03-17	0.06	111.59	136.27
169	2021-03-18	0.06	111.62	136.27
170	2021-03-19	0.06	111.62	136.27

	Time	CEMS_3-PM_U	CEMS_3-NOx_U	CEMS_3-SO2_U
SI No.				
171	2021-03-20	0.06	111.61	136.26
172	2021-03-21	0.06	111.67	136.28
173	2021-03-22	0.06	111.69	136.31
174	2021-03-23	0.06	111.72	136.55
175	2021-03-24	0.06	111.76	136.97
176	2021-03-25	0.06	111.73	136.65
177	2021-03-26	0.06	111.73	136.78
178	2021-03-27	0.06	111.74	136.86
179	2021-03-28	0.06	111.78	136.97
180	2021-03-29	0.06	111.76	136.96
181	2021-03-30	0.06	111.71	136.67
182	2021-03-31	0.06	111.61	136.27

**Report Details:** JSPLAngul | 2021-05-25 14:09:18 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: M/s. Jindal Steel & Power Ltd.

Report: Custom Report

From Date: 2020/12/01 00:00:00 To Date : 2021/03/31 23:59:56

Description	Stack_1_CPP_1_135MW-PM_U	Stack_1_CPP_1_135MW-SO2_U	Stack_1_CPP_1_135MW-NOx_U
Prescribed Standards	-	-	-
Maximum Data	59.32	425.48	167.56
Minimum Data	3.32	6.37	13.07
Geometric Mean	16.28	187.2	101.96
Median	10.87	224.43	102.05
Standard Deviation	14.9	101.59	31.35
Maximum Value At Time	2020-12-11	2020-12-23	2021-02-26
Minimum Value At Time	2020-12-03	2021-01-04	2021-01-07
Valid Data Points	121	121	121
Total Data Points	121	121	121
Data Availability %	100.0%	100.0%	100.0%

SI No	Time	Stack_1_CPP_1_135MW-PM_U	Stack_1_CPP_1_135MW-SO2_U	Stack_1_CPP_1_135MW-NOx_U
1	2020-12-01	39.74	47.47	74.22
2	2020-12-02	38.66	48.98	74.93
3	2020-12-03	3.32	51.46	75.89
4	2020-12-04	59.03	74.77	100.39
5	2020-12-05	43.99	71.21	102.05
6	2020-12-06	18.41	68.95	102.03
7	2020-12-07	15.47	68.97	102.03
8	2020-12-08	33.79	72.76	102.03
9	2020-12-09	57.55	74.58	102.05
10	2020-12-10	56.88	74.56	102.04
11	2020-12-11	59.32	74.56	102.04
12	2020-12-12	57.26	74.62	102.04
13	2020-12-13	56.59	75.79	102.05
14	2020-12-14	58.72	75.79	102.05
15	2020-12-15	57.78	75.79	102.05
16	2020-12-16	55.17	75.76	102.05
17	2020-12-17	41.44	75.77	102.05
18	2020-12-18	39.32	75.76	102.04
19	2020-12-19	39.09	76.06	102.03
20	2020-12-20	39.35	76.40	102.04
21	2020-12-21	36.33	76.30	102.03

SI No	Time	Stack_1_CPP_1_135MW-PM_U	Stack_1_CPP_1_135MW-SO2_U	Stack_1_CPP_1_135MW-NOx_U
22	2020-12-22	39.96	74.44	102.03
23	2020-12-23	19.37	425.48	128.22
24	2020-12-24	10.87	388.25	89.96
25	2020-12-25	14.63	395.93	88.58
26	2020-12-26	12.37	331.87	83.67
27	2020-12-27	16.23	289.78	98.28
28	2020-12-28	17.69	295.11	92.83
29	2020-12-29	13.36	319.68	84.28
30	2020-12-30	18.05	297.41	87.39
31	2020-12-31	13.34	277.71	93.64
32	2021-01-01	13.19	305.21	86.00
33	2021-01-02	12.22	256.88	109.33
34	2021-01-03	19.87	7.69	15.70
35	2021-01-04	4.91	6.37	14.08
36	2021-01-05	6.39	14.30	13.34
37	2021-01-06	14.85	14.46	13.32
38	2021-01-07	11.71	14.82	13.07
39	2021-01-08	14.26	79.02	25.56
40	2021-01-09	10.44	313.26	91.45
41	2021-01-10	12.60	243.58	87.46
42	2021-01-11	7.40	232.24	90.18
43	2021-01-12	7.26	243.98	77.27
44	2021-01-13	11.50	286.58	70.38
45	2021-01-14	7.77	268.95	88.08
46	2021-01-15	12.56	255.90	89.81
47	2021-01-16	19.72	195.26	80.69
48	2021-01-17	17.39	15.13	30.66
49	2021-01-18	3.68	16.48	31.20
50	2021-01-19	11.14	139.42	67.44
51	2021-01-20	8.42	231.07	110.21
52	2021-01-21	5.97	256.54	122.40
53	2021-01-22	7.90	266.24	116.63
54	2021-01-23	8.61	277.15	112.36
55	2021-01-24	9.40	267.50	107.94
56	2021-01-25	11.60	254.21	114.42
57	2021-01-26	8.35	230.88	115.66
58	2021-01-27	4.42	215.75	123.14
59	2021-01-28	5.70	192.20	125.23
60	2021-01-29	4.71	170.31	118.39
61	2021-01-30	4.98	200.04	108.45
62	2021-01-31	34.65	25.96	42.92

SI No	Time	Stack_1_CPP_1_135MW-PM_U	Stack_1_CPP_1_135MW-SO2_U	Stack_1_CPP_1_135MW-NOx_U
63	2021-02-01	4.59	26.55	43.52
64	2021-02-02	11.37	154.83	78.31
65	2021-02-03	7.62	242.25	111.67
66	2021-02-04	4.60	261.00	96.42
67	2021-02-05	5.10	249.79	102.25
68	2021-02-06	6.99	255.05	101.68
69	2021-02-07	8.56	260.64	98.79
70	2021-02-08	9.89	232.31	107.70
71	2021-02-09	11.73	241.67	102.73
72	2021-02-10	11.02	231.48	111.14
73	2021-02-11	9.32	230.02	112.46
74	2021-02-12	7.92	229.46	110.73
75	2021-02-13	11.91	231.65	105.96
76	2021-02-14	9.54	209.90	115.25
77	2021-02-15	7.52	202.57	125.87
78	2021-02-16	10.75	219.42	118.74
79	2021-02-17	11.12	204.07	117.36
80	2021-02-18	15.49	214.14	116.16
81	2021-02-19	10.73	217.67	114.58
82	2021-02-20	7.54	228.19	115.84
83	2021-02-21	9.09	213.32	123.76
84	2021-02-22	12.58	217.10	131.02
85	2021-02-23	15.13	165.86	107.26
86	2021-02-24	21.27	39.66	69.07
87	2021-02-25	11.97	49.32	76.69
88	2021-02-26	8.39	118.45	167.56
89	2021-02-27	22.86	53.27	90.05
90	2021-02-28	10.24	40.29	70.55
91	2021-03-01	11.64	85.03	94.18
92	2021-03-02	16.06	224.43	117.83
93	2021-03-03	15.13	233.49	119.34
94	2021-03-04	13.98	221.75	122.49
95	2021-03-05	12.06	235.42	118.85
96	2021-03-06	8.45	223.17	127.09
97	2021-03-07	13.39	154.21	106.97
98	2021-03-08	7.12	46.26	76.78
99	2021-03-09	10.62	46.24	75.53
100	2021-03-10	8.64	180.79	117.12
101	2021-03-11	9.36	250.16	119.65
102	2021-03-12	5.87	248.79	115.81
103	2021-03-13	5.74	248.79	115.85



SI No	Time	Stack_1_CPP_1_135MW-PM_U	Stack_1_CPP_1_135MW-SO2_U	Stack_1_CPP_1_135MW-NOx_U
104	2021-03-14	8.50	249.29	121.31
105	2021-03-15	5.05	252.15	125.30
106	2021-03-16	5.25	263.64	130.65
107	2021-03-17	6.19	280.73	131.89
108	2021-03-18	6.74	288.92	131.92
109	2021-03-19	6.09	278.56	137.63
110	2021-03-20	5.28	292.26	138.23
111	2021-03-21	5.46	283.20	144.14
112	2021-03-22	7.38	282.54	141.50
113	2021-03-23	7.39	278.15	143.08
114	2021-03-24	9.13	266.64	148.12
115	2021-03-25	8.12	264.13	150.74
116	2021-03-26	7.02	277.63	145.57
117	2021-03-27	6.38	274.03	143.28
118	2021-03-28	6.92	255.07	150.94
119	2021-03-29	6.29	257.53	151.85
120	2021-03-30	7.38	299.91	151.95
121	2021-03-31	6.17	288.49	156.65

**Report Details:** JSPLAngul | 2021-05-25 14:04:38 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
Prescribed Standards	0 -	0 -	0 - 100
Maximum Data	58.3	555.55	58.65
Minimum Data	2.15	0.11	0.12
Geometric Mean	35.6	304.33	21.78
Median	44.82	391.83	25.81
Standard Deviation	18.39	185.88	17.18
Maximum Value At Time	2020-10-25	2020-10-25	2021-03-23
Minimum Value At Time	2020-11-05	2020-11-09	2020-11-01
Valid Data Points	181	181	181
Total Data Points	182	182	182
Data Availability %	99.45%	99.45%	99.45%

	Time	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
Sl No.				
1	2020-10-01	46.53	414.31	28.37
2	2020-10-02	49.22	447.07	34.41
3	2020-10-03	22.16	160.84	8.20
4	2020-10-04	24.41	172.06	10.79
5	2020-10-05	6.94	1.03	0.20
6	2020-10-06	25.70	165.60	7.57
7	2020-10-07	41.21	350.52	21.77
8	2020-10-08	9.94	35.14	0.19
9	2020-10-09	4.64	0.17	0.20
10	2020-10-10	4.61	4.71	0.26
11	2020-10-11	22.54	129.69	0.46
12	2020-10-12	7.39	19.20	0.20
13	2020-10-13	8.37	22.84	0.18
14	2020-10-14	48.10	432.98	31.18

	Time	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
SI No.				
15	2020-10-15	55.74	524.67	44.73
16	2020-10-16	53.53	498.22	40.79
17	2020-10-17	49.76	452.89	34.03
18	2020-10-18	51.78	477.06	37.62
19	2020-10-19	50.21	458.36	34.84
20	2020-10-20	50.15	457.65	34.75
21	2020-10-21	55.66	523.96	44.63
22	2020-10-22	39.87	334.79	17.24
23	2020-10-23	30.62	224.04	1.30
24	2020-10-24	55.52	522.09	44.35
25	2020-10-25	58.30	555.55	49.34
26	2020-10-26	55.56	522.72	44.43
27	2020-10-27	52.05	480.71	38.16
28	2020-10-28	56.96	539.35	46.93
29	2020-10-29	55.49	521.85	44.29
30	2020-10-30	53.38	496.65	40.54
31	2020-10-31	50.45	461.47	35.69
32	2020-11-01	6.21	2.67	0.12
33	2020-11-02	13.03	12.59	0.18
34	2020-11-03	6.20	22.32	0.57
35	2020-11-04	2.16	0.21	0.14
36	2020-11-05	2.15	0.17	0.15
37	2020-11-06	2.15	0.12	0.17
38	2020-11-07	2.41	0.13	0.15
39	2020-11-08	2.22	0.13	0.16
40	2020-11-09	2.16	0.11	0.19

	Time	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
SI No.				
41	2020-11-10	2.15	0.12	0.17
42	2020-11-11	2.18	0.14	0.17
43	2020-11-12	2.20	0.12	0.19
44	2020-11-13	2.39	0.17	0.17
45	2020-11-14	2.53	0.15	0.17
46	2020-11-15	2.51	0.13	0.18
47	2020-11-16	2.44	0.12	0.19
48	2020-11-17	2.49	0.12	0.20
49	2020-11-18	2.39	0.15	0.19
50	2020-11-19	2.39	0.12	0.19
51	2020-11-20	2.39	0.11	0.20
52	2020-11-21	2.36	0.15	0.20
53	2020-11-22	2.37	0.16	0.17
54	2020-11-23	3.26	2.93	0.16
55	2020-11-24	11.99	20.21	0.17
56	2020-11-25	16.45	78.82	4.51
57	2020-11-26	2.56	0.20	0.20
58	2020-11-27	3.38	0.16	0.19
59	2020-11-28	25.30	170.15	6.36
60	2020-11-29	25.70	164.91	0.19
61	2020-11-30	33.65	260.34	9.44
62	2020-12-01	47.00	420.19	29.11
63	2020-12-02	50.99	467.92	36.25
64	2020-12-03	55.56	522.64	44.42
65	2020-12-04	56.12	529.30	45.42
66	2020-12-05	52.48	485.67	38.90

	Time	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
SI No.				
67	2020-12-06	36.42	307.70	19.61
68	2020-12-07	54.67	504.90	42.82
69	2020-12-08	55.19	515.27	43.77
70	2020-12-09	55.01	516.29	43.44
71	2020-12-10	45.14	390.36	25.80
72	2020-12-11	37.90	310.88	12.77
73	2020-12-12	39.56	330.82	15.77
74	2020-12-13	39.74	332.95	16.09
75	2020-12-14	48.98	443.55	32.61
76	2020-12-15	54.44	509.04	42.38
77	2020-12-16	53.33	495.75	40.40
78	2020-12-17	50.80	465.31	35.87
79	2020-12-18	43.51	378.10	23.60
80	2020-12-19	29.19	206.94	0.17
81	2020-12-20	28.21	195.17	0.19
82	2020-12-21	23.20	134.49	0.20
83	2020-12-22	28.24	195.70	0.18
84	2020-12-23	27.74	189.67	0.19
85	2020-12-24	28.35	196.72	0.25
86	2020-12-25	29.50	210.58	0.70
87	2020-12-26	29.26	207.73	0.53
88	2020-12-27	29.01	204.78	0.19
89	2020-12-28	28.98	204.49	0.28
90	2020-12-29	36.08	289.51	10.52
91	2020-12-30	56.46	533.63	46.06
92	2020-12-31	53.12	493.46	40.07

	Time	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
SI No.				
93	2021-01-01	48.93	443.05	32.54
94	2021-01-02	49.07	444.81	32.82
95	2021-01-03	37.29	303.90	13.57
96	2021-01-04	26.07	169.45	0.20
97	2021-01-05	12.26	44.58	0.17
98	2021-01-06	27.55	187.39	0.18
99	2021-01-07	28.43	197.94	0.36
100	2021-01-08	42.85	370.62	23.48
101	2021-01-09	54.04	504.81	41.75
102	2021-01-10	54.43	509.31	42.42
103	2021-01-11	55.26	519.31	43.92
104	2021-01-12	51.50	474.17	37.18
105	2021-01-13	47.06	419.83	29.08
106	2021-01-14	40.59	343.14	19.88
107	2021-01-15	45.40	400.89	27.10
108	2021-01-16	45.88	406.70	27.11
109	2021-01-17	44.64	391.83	24.90
110	2021-01-18	45.17	397.95	25.81
111	2021-01-19	47.66	427.80	30.28
112	2021-01-20	48.21	434.38	31.25
113	2021-01-21	54.22	506.52	42.01
114	2021-01-22	53.80	501.82	41.29
115	2021-01-23	49.09	445.19	32.85
116	2021-01-24	47.82	429.96	30.57
117	2021-01-25	43.83	382.25	23.45
118	2021-01-26	43.51	378.39	22.88

	Time	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
SI No.				
119	2021-01-27	43.26	375.30	22.42
120	2021-01-28	42.04	360.71	20.23
121	2021-01-29	45.29	399.66	26.06
122	2021-01-30	40.90	346.99	18.18
123	2021-01-31	52.99	491.74	39.81
124	2021-02-01	52.85	490.18	39.57
125	2021-02-02	52.69	488.66	39.33
126	2021-02-03	48.16	434.43	31.24
127	2021-02-04	47.10	421.51	29.31
128	2021-02-05	47.12	421.73	29.35
129	2021-02-06	51.34	472.39	36.91
130	2021-02-07	46.50	415.84	28.45
131	2021-02-08	46.66	416.26	28.54
132	2021-02-09	45.86	406.77	27.12
133	2021-02-10	46.26	411.45	27.81
134	2021-02-11	46.12	409.87	27.57
135	2021-02-12	47.85	430.46	30.66
136	2021-02-13	44.89	394.95	25.36
137	2021-02-14	46.67	416.31	28.55
138	2021-02-15	45.70	404.62	26.80
139	2021-02-16	45.94	407.48	27.22
140	2021-02-17	44.82	394.11	25.22
141	2021-02-18	46.57	415.02	28.35
142	2021-02-19	45.58	403.23	26.59
143	2021-02-20	43.93	383.35	23.62
144	2021-02-21	43.36	376.46	22.58

	Time	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
SI No.				
145	2021-02-22	45.38	400.63	26.20
146	2021-02-23	45.30	399.76	26.07
147	2021-02-24	44.55	390.70	24.72
148	2021-02-25	46.57	415.07	28.36
149	2021-02-26	50.44	461.54	35.30
150	2021-02-27	53.94	503.59	41.55
151	2021-02-28	53.08	493.29	40.02
152	2021-03-01	31.20	231.58	10.02
153	2021-03-02	5.40	1.17	0.20
154	2021-03-03	21.67	131.77	1.57
155	2021-03-04	32.76	249.75	4.01
156	2021-03-05	33.70	261.05	5.35
157	2021-03-06	35.39	281.19	17.49
158	2021-03-07	36.92	299.61	47.05
159	2021-03-08	37.38	304.93	47.84
160	2021-03-09	16.58	111.08	17.46
161	2021-03-10	4.78	0.21	0.21
162	2021-03-11	6.51	2.80	0.74
163	2021-03-12	4.13	0.24	0.23
164	2021-03-13	7.30	18.29	3.22
165	2021-03-14	16.91	78.93	12.99
166	2021-03-15	43.77	381.01	50.85
167	2021-03-16	45.31	399.54	40.41
168	2021-03-17	48.42	436.81	45.99
169	2021-03-18	45.05	396.52	39.98
170	2021-03-19	46.18	410.05	41.98



	Time	CEMS_7-NOx_U	CEMS_7-SO2_U	CEMS_7-PM_U
SI No.				
171	2021-03-20	48.61	439.11	46.33
172	2021-03-21	NA	NA	NA
173	2021-03-22	53.28	495.23	54.73
174	2021-03-23	55.47	521.49	58.65
175	2021-03-24	51.48	473.36	47.34
176	2021-03-25	46.98	419.54	31.42
177	2021-03-26	48.22	434.45	33.65
178	2021-03-27	46.81	417.39	31.12
179	2021-03-28	47.01	420.12	31.52
180	2021-03-29	45.39	400.75	28.62
181	2021-03-30	46.91	418.97	31.35
182	2021-03-31	47.16	421.99	31.80

Report Details: JSPLAngul | 2021-05-25 14:12:30 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
Prescribed Standards	0 - 100	0 -	0 -
Maximum Data	54.13	454.47	489.19
Minimum Data	0.02	0.09	0.0
Geometric Mean	18.57	177.91	134.53
Median	22.16	189.53	52.25
Standard Deviation	14.6	78.8	142.5
Maximum Value At Time	2021-01-31	2020-10-05	2021-03-25
Minimum Value At Time	2021-01-22	2021-03-23	2020-10-08
Valid Data Points	181	181	169
Total Data Points	182	182	182
Data Availability %	99.45%	99.45%	92.86%

	Time	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
Sl No.				
1	2020-10-01	32.75	155.26	264.16
2	2020-10-02	29.61	156.26	258.15
3	2020-10-03	35.35	163.22	296.06
4	2020-10-04	22.71	252.07	247.19
5	2020-10-05	3.77	454.47	128.82
6	2020-10-06	7.87	209.65	162.28
7	2020-10-07	0.37	109.69	244.84
8	2020-10-08	0.05	85.25	0.00
9	2020-10-09	0.05	85.18	0.00
10	2020-10-10	0.04	84.16	39.26
11	2020-10-11	0.18	93.27	109.28
12	2020-10-12	0.05	84.88	2.30
13	2020-10-13	0.05	84.10	0.00
14	2020-10-14	0.05	82.39	NA

	Time	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
SI No.				
15	2020-10-15	0.06	81.88	NA
16	2020-10-16	0.05	82.86	NA
17	2020-10-17	0.05	83.93	NA
18	2020-10-18	0.03	84.60	0.00
19	2020-10-19	0.03	85.14	NA
20	2020-10-20	0.03	85.40	0.00
21	2020-10-21	0.03	85.17	0.00
22	2020-10-22	0.03	84.26	0.00
23	2020-10-23	0.04	84.57	NA
24	2020-10-24	0.03	84.07	0.00
25	2020-10-25	0.04	84.57	NA
26	2020-10-26	0.04	83.70	0.00
27	2020-10-27	0.04	83.70	0.00
28	2020-10-28	0.04	83.47	0.00
29	2020-10-29	0.03	83.54	0.00
30	2020-10-30	0.04	83.96	0.01
31	2020-10-31	0.04	84.61	0.00
32	2020-11-01	0.05	85.23	NA
33	2020-11-02	0.03	89.60	0.00
34	2020-11-03	0.04	86.01	0.00
35	2020-11-04	0.05	85.57	NA
36	2020-11-05	0.05	90.26	0.00
37	2020-11-06	0.07	84.86	0.00
38	2020-11-07	0.03	84.38	0.00
39	2020-11-08	0.03	83.82	0.00
40	2020-11-09	0.04	84.03	0.00

	Time	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
SI No.				
41	2020-11-10	0.04	84.39	0.01
42	2020-11-11	0.05	85.42	0.00
43	2020-11-12	0.03	188.66	0.01
44	2020-11-13	23.33	245.79	NA
45	2020-11-14	28.74	145.99	0.00
46	2020-11-15	32.08	193.44	0.00
47	2020-11-16	34.26	194.73	0.00
48	2020-11-17	29.21	185.09	0.00
49	2020-11-18	30.30	196.76	0.00
50	2020-11-19	30.01	189.88	0.00
51	2020-11-20	30.78	189.04	0.00
52	2020-11-21	23.35	185.48	0.00
53	2020-11-22	26.12	186.12	0.00
54	2020-11-23	27.43	185.26	0.00
55	2020-11-24	30.42	182.39	0.00
56	2020-11-25	31.99	189.53	0.00
57	2020-11-26	30.55	190.25	0.01
58	2020-11-27	31.68	185.34	0.00
59	2020-11-28	30.18	181.74	0.00
60	2020-11-29	31.32	185.14	0.00
61	2020-11-30	30.77	176.69	0.00
62	2020-12-01	30.01	178.76	0.00
63	2020-12-02	34.11	188.12	0.01
64	2020-12-03	36.45	192.09	0.00
65	2020-12-04	38.91	183.33	0.00
66	2020-12-05	37.46	183.11	0.00

	Time	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
SI No.				
67	2020-12-06	28.69	165.00	0.00
68	2020-12-07	1.47	107.98	0.00
69	2020-12-08	19.10	236.27	0.00
70	2020-12-09	33.86	186.19	0.00
71	2020-12-10	30.02	183.43	0.00
72	2020-12-11	27.20	182.44	0.00
73	2020-12-12	29.45	181.22	0.00
74	2020-12-13	28.56	176.06	0.00
75	2020-12-14	14.12	164.66	0.00
76	2020-12-15	0.28	93.73	0.00
77	2020-12-16	0.04	82.97	0.00
78	2020-12-17	1.72	246.27	0.01
79	2020-12-18	11.02	253.72	0.00
80	2020-12-19	27.22	262.75	0.00
81	2020-12-20	24.48	262.60	0.00
82	2020-12-21	14.86	244.33	0.00
83	2020-12-22	20.73	241.70	0.00
84	2020-12-23	26.80	256.69	0.00
85	2020-12-24	25.93	254.44	0.00
86	2020-12-25	28.20	261.15	0.00
87	2020-12-26	27.00	257.80	0.00
88	2020-12-27	25.02	250.83	0.00
89	2020-12-28	26.33	259.50	0.00
90	2020-12-29	28.83	259.84	0.00
91	2020-12-30	35.33	268.68	0.00
92	2020-12-31	32.58	272.20	0.00

	Time	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
SI No.				
93	2021-01-01	25.49	259.88	0.00
94	2021-01-02	25.65	258.83	0.00
95	2021-01-03	26.53	256.55	0.00
96	2021-01-04	25.82	230.17	0.00
97	2021-01-05	32.67	249.11	0.00
98	2021-01-06	29.89	157.71	0.00
99	2021-01-07	26.23	170.61	0.00
100	2021-01-08	29.50	110.23	0.00
101	2021-01-09	19.95	196.28	0.00
102	2021-01-10	0.17	99.00	0.01
103	2021-01-11	0.04	84.07	NA
104	2021-01-12	1.53	223.92	NA
105	2021-01-13	19.11	229.05	312.04
106	2021-01-14	20.99	190.20	306.56
107	2021-01-15	22.16	232.56	306.80
108	2021-01-16	18.87	235.40	275.43
109	2021-01-17	16.81	233.91	265.15
110	2021-01-18	15.27	220.79	264.60
111	2021-01-19	14.23	204.26	263.46
112	2021-01-20	11.24	199.20	259.65
113	2021-01-21	1.32	150.45	458.32
114	2021-01-22	0.02	82.15	121.60
115	2021-01-23	1.02	313.04	217.88
116	2021-01-24	1.61	238.57	241.07
117	2021-01-25	0.48	231.10	238.26
118	2021-01-26	0.68	242.29	239.74

	Time	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
SI No.				
119	2021-01-27	0.32	240.58	237.99
120	2021-01-28	1.83	249.29	244.34
121	2021-01-29	1.87	259.92	250.41
122	2021-01-30	9.48	255.95	252.55
123	2021-01-31	54.13	268.27	353.51
124	2021-02-01	51.39	262.93	347.39
125	2021-02-02	31.65	226.44	301.39
126	2021-02-03	10.01	93.82	52.25
127	2021-02-04	0.32	82.06	139.47
128	2021-02-05	0.85	82.29	54.55
129	2021-02-06	11.02	215.64	178.70
130	2021-02-07	20.20	231.28	212.37
131	2021-02-08	20.09	226.62	230.68
132	2021-02-09	20.41	233.32	233.09
133	2021-02-10	19.89	231.49	229.54
134	2021-02-11	31.78	237.70	281.12
135	2021-02-12	32.67	252.41	307.50
136	2021-02-13	32.53	245.76	290.71
137	2021-02-14	38.18	255.74	307.35
138	2021-02-15	35.68	249.96	303.92
139	2021-02-16	33.83	241.00	297.82
140	2021-02-17	34.04	246.31	299.18
141	2021-02-18	35.00	251.35	302.63
142	2021-02-19	34.65	252.71	306.27
143	2021-02-20	32.67	247.57	299.38
144	2021-02-21	29.58	244.42	284.69

	Time	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
SI No.				
145	2021-02-22	33.94	254.03	300.99
146	2021-02-23	35.90	266.19	314.03
147	2021-02-24	37.76	267.35	318.07
148	2021-02-25	34.36	249.22	305.96
149	2021-02-26	35.91	258.21	311.78
150	2021-02-27	39.38	252.08	328.62
151	2021-02-28	39.55	251.54	332.54
152	2021-03-01	34.19	250.08	308.13
153	2021-03-02	42.26	259.05	339.77
154	2021-03-03	38.74	257.89	319.98
155	2021-03-04	38.59	265.52	317.25
156	2021-03-05	35.07	272.07	301.57
157	2021-03-06	33.08	257.93	298.91
158	2021-03-07	35.03	266.12	299.17
159	2021-03-08	27.33	241.80	267.45
160	2021-03-09	13.52	198.33	246.10
161	2021-03-10	28.37	246.08	286.95
162	2021-03-11	36.39	232.23	329.18
163	2021-03-12	21.05	279.56	273.76
164	2021-03-13	32.23	249.17	310.85
165	2021-03-14	36.43	245.42	325.20
166	2021-03-15	22.65	223.84	256.09
167	2021-03-16	22.03	137.51	254.76
168	2021-03-17	24.09	79.44	264.04
169	2021-03-18	25.20	89.11	270.32
170	2021-03-19	25.84	81.50	268.79



	Time	CEMS_8-PM_U	CEMS_8-NOx_U	CEMS_8-SO2_U
SI No.				
171	2021-03-20	24.15	83.86	265.27
172	2021-03-21	NA	NA	NA
173	2021-03-22	0.93	0.10	118.67
174	2021-03-23	8.82	0.09	351.20
175	2021-03-24	0.25	0.10	174.76
176	2021-03-25	0.08	0.10	489.19
177	2021-03-26	8.25	37.72	219.30
178	2021-03-27	13.40	70.28	247.58
179	2021-03-28	13.48	76.86	250.67
180	2021-03-29	14.00	74.88	251.35
181	2021-03-30	13.02	79.28	248.18
182	2021-03-31	12.59	74.24	247.55

**Report Details:** JSPLAngul | 2021-05-25 14:13:28 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
Prescribed Standards	0 - 100	0 -	0 -
Maximum Data	44.25	199.9	523.78
Minimum Data	0.02	66.55	3.74
Geometric Mean	28.49	128.22	334.88
Median	36.12	66.6	261.74
Standard Deviation	14.12	66.49	123.03
Maximum Value At Time	2020-10-10	2020-10-05	2021-03-22
Minimum Value At Time	2020-10-17	2021-03-03	2021-02-01
Valid Data Points	181	181	181
Total Data Points	182	182	182
Data Availability %	99.45%	99.45%	99.45%

	Time	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
Sl No.				
1	2020-10-01	41.40	199.87	232.96
2	2020-10-02	42.29	199.88	232.97
3	2020-10-03	44.21	199.87	232.97
4	2020-10-04	39.78	199.88	232.99
5	2020-10-05	14.32	199.90	233.01
6	2020-10-06	4.01	199.90	233.00
7	2020-10-07	16.70	199.90	233.00
8	2020-10-08	38.32	199.90	232.99
9	2020-10-09	40.91	199.89	232.99
10	2020-10-10	44.25	199.89	232.98
11	2020-10-11	39.83	199.88	232.98
12	2020-10-12	37.09	199.90	233.00
13	2020-10-13	38.78	199.88	232.59
14	2020-10-14	5.87	199.88	233.00

	Time	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
SI No.				
15	2020-10-15	1.02	199.88	233.01
16	2020-10-16	0.03	199.88	233.00
17	2020-10-17	0.02	199.88	232.99
18	2020-10-18	0.03	199.88	232.99
19	2020-10-19	0.03	199.88	232.99
20	2020-10-20	0.03	199.88	233.01
21	2020-10-21	0.13	199.88	233.00
22	2020-10-22	17.45	199.88	232.99
23	2020-10-23	20.52	199.88	232.99
24	2020-10-24	4.62	199.88	233.00
25	2020-10-25	0.03	199.88	233.01
26	2020-10-26	2.72	199.88	233.01
27	2020-10-27	0.03	199.88	233.01
28	2020-10-28	0.03	199.88	233.02
29	2020-10-29	0.03	199.88	233.02
30	2020-10-30	0.03	199.88	233.00
31	2020-10-31	6.50	199.88	233.00
32	2020-11-01	40.92	199.88	232.97
33	2020-11-02	39.87	199.87	232.97
34	2020-11-03	38.95	199.87	232.97
35	2020-11-04	36.94	199.88	232.99
36	2020-11-05	37.41	199.88	232.99
37	2020-11-06	38.25	199.88	232.99
38	2020-11-07	37.78	199.88	232.99
39	2020-11-08	36.19	199.88	232.99
40	2020-11-09	37.25	199.88	232.99

	Time	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
SI No.				
41	2020-11-10	37.78	199.88	232.99
42	2020-11-11	37.21	199.88	232.98
43	2020-11-12	37.88	199.88	232.99
44	2020-11-13	9.48	199.88	233.00
45	2020-11-14	6.73	199.88	233.00
46	2020-11-15	0.03	199.88	233.00
47	2020-11-16	0.03	199.88	233.00
48	2020-11-17	0.89	199.88	233.00
49	2020-11-18	2.59	199.88	233.00
50	2020-11-19	1.00	199.88	232.99
51	2020-11-20	8.18	199.88	232.99
52	2020-11-21	19.85	199.88	232.99
53	2020-11-22	27.93	199.88	232.99
54	2020-11-23	38.11	199.88	232.98
55	2020-11-24	40.94	199.88	232.98
56	2020-11-25	38.36	199.87	232.97
57	2020-11-26	34.62	199.88	232.96
58	2020-11-27	36.63	199.88	232.96
59	2020-11-28	36.14	199.88	232.96
60	2020-11-29	35.93	199.88	232.96
61	2020-11-30	30.84	199.87	232.96
62	2020-12-01	19.85	199.88	232.95
63	2020-12-02	22.27	199.88	233.00
64	2020-12-03	0.68	199.89	233.02
65	2020-12-04	0.46	199.88	233.01
66	2020-12-05	5.30	199.88	233.01

	Time	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
SI No.				
67	2020-12-06	41.38	199.88	233.01
68	2020-12-07	43.45	199.87	232.99
69	2020-12-08	38.31	199.87	232.99
70	2020-12-09	8.68	199.88	233.01
71	2020-12-10	20.05	199.88	232.99
72	2020-12-11	36.59	199.88	232.98
73	2020-12-12	36.38	199.88	232.97
74	2020-12-13	35.26	199.87	232.97
75	2020-12-14	39.97	199.88	232.95
76	2020-12-15	42.58	199.88	232.96
77	2020-12-16	40.63	199.87	232.95
78	2020-12-17	39.83	199.87	232.95
79	2020-12-18	37.06	199.87	232.95
80	2020-12-19	36.92	199.87	232.97
81	2020-12-20	35.54	199.87	232.96
82	2020-12-21	31.02	199.88	232.96
83	2020-12-22	36.25	199.87	232.94
84	2020-12-23	37.56	159.16	307.09
85	2020-12-24	38.08	66.57	475.63
86	2020-12-25	39.28	66.57	488.30
87	2020-12-26	39.30	66.57	494.10
88	2020-12-27	37.78	66.58	476.59
89	2020-12-28	37.22	66.58	474.73
90	2020-12-29	33.92	66.59	425.19
91	2020-12-30	7.49	66.60	107.69
92	2020-12-31	8.24	66.60	155.59

	Time	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
SI No.				
93	2021-01-01	18.89	66.60	376.86
94	2021-01-02	19.55	66.60	382.81
95	2021-01-03	31.46	66.60	438.55
96	2021-01-04	37.17	66.59	470.76
97	2021-01-05	43.43	66.58	519.50
98	2021-01-06	37.75	66.59	469.89
99	2021-01-07	37.34	66.59	474.88
100	2021-01-08	23.73	66.60	367.15
101	2021-01-09	22.23	66.61	288.12
102	2021-01-10	41.46	66.59	499.21
103	2021-01-11	42.57	66.59	518.88
104	2021-01-12	39.17	66.59	488.33
105	2021-01-13	33.89	66.59	451.30
106	2021-01-14	36.39	66.60	470.31
107	2021-01-15	39.31	66.59	488.93
108	2021-01-16	39.72	66.58	481.34
109	2021-01-17	38.36	66.58	482.12
110	2021-01-18	35.71	66.60	460.93
111	2021-01-19	35.97	66.60	466.49
112	2021-01-20	37.03	66.60	466.33
113	2021-01-21	40.63	66.59	509.55
114	2021-01-22	41.08	66.59	514.16
115	2021-01-23	39.19	66.57	493.77
116	2021-01-24	37.56	66.58	479.69
117	2021-01-25	36.60	66.57	468.48
118	2021-01-26	37.98	66.59	486.31

	Time	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
SI No.				
119	2021-01-27	37.91	66.59	489.35
120	2021-01-28	35.20	66.59	466.03
121	2021-01-29	36.72	66.59	476.48
122	2021-01-30	35.52	66.59	449.89
123	2021-01-31	12.01	66.59	174.92
124	2021-02-01	4.40	66.58	3.74
125	2021-02-02	23.13	66.58	302.34
126	2021-02-03	33.23	66.58	439.33
127	2021-02-04	34.99	66.58	445.01
128	2021-02-05	36.69	66.56	464.76
129	2021-02-06	39.02	66.56	480.28
130	2021-02-07	40.53	66.56	483.87
131	2021-02-08	35.74	66.57	459.52
132	2021-02-09	35.84	66.58	448.26
133	2021-02-10	36.56	66.58	466.34
134	2021-02-11	19.84	66.60	261.74
135	2021-02-12	9.31	66.60	175.96
136	2021-02-13	20.29	66.57	384.64
137	2021-02-14	20.31	66.57	385.24
138	2021-02-15	19.55	66.57	383.31
139	2021-02-16	20.61	66.57	389.78
140	2021-02-17	19.80	66.57	394.50
141	2021-02-18	26.34	66.57	391.46
142	2021-02-19	23.96	66.57	338.43
143	2021-02-20	26.04	66.58	389.59
144	2021-02-21	28.25	66.58	380.44

	Time	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
SI No.				
145	2021-02-22	28.03	66.59	383.04
146	2021-02-23	28.32	66.58	381.61
147	2021-02-24	28.51	66.57	379.29
148	2021-02-25	29.07	66.57	378.40
149	2021-02-26	20.23	66.58	270.10
150	2021-02-27	6.77	66.58	34.11
151	2021-02-28	3.18	66.58	23.75
152	2021-03-01	33.05	66.56	432.99
153	2021-03-02	41.13	66.56	511.80
154	2021-03-03	39.41	66.55	492.09
155	2021-03-04	36.28	66.55	453.22
156	2021-03-05	37.69	66.56	475.24
157	2021-03-06	35.09	66.56	444.61
158	2021-03-07	38.74	66.55	472.93
159	2021-03-08	38.53	66.56	479.85
160	2021-03-09	27.97	66.59	353.33
161	2021-03-10	32.14	66.57	408.13
162	2021-03-11	38.63	66.58	470.61
163	2021-03-12	33.70	66.60	436.03
164	2021-03-13	32.47	66.60	420.80
165	2021-03-14	39.19	66.60	489.45
166	2021-03-15	38.54	66.60	481.16
167	2021-03-16	39.30	66.60	486.22
168	2021-03-17	39.35	66.59	486.10
169	2021-03-18	36.12	66.59	455.49
170	2021-03-19	37.58	66.59	468.28



	Time	CEMS_21-PM_U	CEMS_21-NOx_U	CEMS_21-SO2_U
SI No.				
171	2021-03-20	37.37	66.59	465.94
172	2021-03-21	NA	NA	NA
173	2021-03-22	42.81	66.57	523.78
174	2021-03-23	41.44	66.58	512.33
175	2021-03-24	40.83	66.58	505.99
176	2021-03-25	41.23	66.57	504.93
177	2021-03-26	40.55	66.58	497.45
178	2021-03-27	35.73	66.57	456.74
179	2021-03-28	35.26	66.57	454.86
180	2021-03-29	38.33	66.57	483.65
181	2021-03-30	37.98	66.58	483.37
182	2021-03-31	37.30	66.57	472.59

Report Details: JSPLAngul | 2021-05-25 14:17:39 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
Prescribed Standards	0 - 100	0 - 100	0 - 100
Maximum Data	4.89	842.03	NA
Minimum Data	0.0	0.0	NA
Geometric Mean	2.01	163.0	NA
Median	0.0	102.96	NA
Standard Deviation	2.25	185.34	NA
Maximum Value At Time	2020-11-20	2021-01-19	NA
Minimum Value At Time	2020-12-23	2020-10-06	NA
Valid Data Points	177	177	0
Total Data Points	182	182	182
Data Availability %	97.25%	97.25%	0.0%

	Time	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
SI No.				
1	2020-10-01	NA	NA	NA
2	2020-10-02	NA	NA	NA
3	2020-10-03	NA	NA	NA
4	2020-10-04	NA	NA	NA
5	2020-10-05	4.56	76.99	NA
6	2020-10-06	4.56	0.00	NA
7	2020-10-07	4.54	23.81	NA
8	2020-10-08	4.59	116.93	NA
9	2020-10-09	4.56	21.71	NA
10	2020-10-10	4.54	70.52	NA
11	2020-10-11	4.79	12.98	NA
12	2020-10-12	4.50	16.15	NA
13	2020-10-13	4.30	20.15	NA
14	2020-10-14	4.83	238.22	NA

	Time	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
SI No.				
15	2020-10-15	4.53	5.95	NA
16	2020-10-16	4.63	52.14	NA
17	2020-10-17	4.78	12.91	NA
18	2020-10-18	4.74	130.79	NA
19	2020-10-19	4.59	115.48	NA
20	2020-10-20	4.68	15.38	NA
21	2020-10-21	4.59	8.45	NA
22	2020-10-22	4.44	9.82	NA
23	2020-10-23	4.47	8.07	NA
24	2020-10-24	4.37	0.00	NA
25	2020-10-25	4.26	0.00	NA
26	2020-10-26	4.54	11.10	NA
27	2020-10-27	4.65	139.06	NA
28	2020-10-28	4.72	19.76	NA
29	2020-10-29	4.75	105.86	NA
30	2020-10-30	4.81	85.84	NA
31	2020-10-31	4.75	141.59	NA
32	2020-11-01	4.83	203.99	NA
33	2020-11-02	4.84	19.98	NA
34	2020-11-03	4.66	60.49	NA
35	2020-11-04	4.82	221.33	NA
36	2020-11-05	4.72	42.80	NA
37	2020-11-06	4.83	80.66	NA
38	2020-11-07	4.73	22.06	NA
39	2020-11-08	4.46	38.89	NA
40	2020-11-09	4.45	44.32	NA

	Time	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
SI No.				
41	2020-11-10	4.38	104.16	NA
42	2020-11-11	4.51	64.48	NA
43	2020-11-12	4.65	24.20	NA
44	2020-11-13	4.84	38.33	NA
45	2020-11-14	4.85	179.76	NA
46	2020-11-15	4.65	21.90	NA
47	2020-11-16	4.76	78.16	NA
48	2020-11-17	4.65	268.67	NA
49	2020-11-18	4.68	266.83	NA
50	2020-11-19	4.75	9.92	NA
51	2020-11-20	4.89	21.75	NA
52	2020-11-21	4.68	45.54	NA
53	2020-11-22	4.46	115.78	NA
54	2020-11-23	4.29	65.91	NA
55	2020-11-24	4.00	109.05	NA
56	2020-11-25	3.56	64.60	NA
57	2020-11-26	4.13	60.74	NA
58	2020-11-27	4.30	102.96	NA
59	2020-11-28	4.44	18.21	NA
60	2020-11-29	4.53	1.88	NA
61	2020-11-30	4.40	52.72	NA
62	2020-12-01	4.34	12.95	NA
63	2020-12-02	4.38	10.98	NA
64	2020-12-03	4.49	41.77	NA
65	2020-12-04	4.49	48.27	NA
66	2020-12-05	4.36	27.30	NA

	Time	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
SI No.				
67	2020-12-06	4.39	25.91	NA
68	2020-12-07	4.47	3.66	NA
69	2020-12-08	4.50	26.73	NA
70	2020-12-09	4.49	43.50	NA
71	2020-12-10	4.47	3.18	NA
72	2020-12-11	4.46	46.78	NA
73	2020-12-12	4.50	63.06	NA
74	2020-12-13	4.35	89.60	NA
75	2020-12-14	4.48	190.76	NA
76	2020-12-15	4.43	151.10	NA
77	2020-12-16	4.38	405.33	NA
78	2020-12-17	4.37	128.95	NA
79	2020-12-18	4.38	219.93	NA
80	2020-12-19	4.17	146.75	NA
81	2020-12-20	4.16	566.89	NA
82	2020-12-21	4.03	44.10	NA
83	2020-12-22	3.04	18.90	NA
84	2020-12-23	0.00	96.70	NA
85	2020-12-24	0.00	533.41	NA
86	2020-12-25	0.00	7.06	NA
87	2020-12-26	0.00	29.24	NA
88	2020-12-27	0.00	179.09	NA
89	2020-12-28	0.00	164.79	NA
90	2020-12-29	0.00	263.58	NA
91	2020-12-30	0.00	131.07	NA
92	2020-12-31	0.00	148.74	NA

	Time	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
SI No.				
93	2021-01-01	0.00	431.17	NA
94	2021-01-02	0.00	322.11	NA
95	2021-01-03	0.00	32.71	NA
96	2021-01-04	0.00	341.47	NA
97	2021-01-05	0.00	431.56	NA
98	2021-01-06	0.00	30.65	NA
99	2021-01-07	0.00	10.48	NA
100	2021-01-08	0.00	13.44	NA
101	2021-01-09	0.00	14.19	NA
102	2021-01-10	0.00	62.22	NA
103	2021-01-11	0.00	455.32	NA
104	2021-01-12	0.00	408.57	NA
105	2021-01-13	0.00	37.56	NA
106	2021-01-14	0.00	72.20	NA
107	2021-01-15	0.00	87.31	NA
108	2021-01-16	0.00	230.25	NA
109	2021-01-17	0.00	382.61	NA
110	2021-01-18	0.00	287.85	NA
111	2021-01-19	0.00	842.03	NA
112	2021-01-20	0.00	765.45	NA
113	2021-01-21	0.00	19.68	NA
114	2021-01-22	0.00	147.41	NA
115	2021-01-23	0.00	171.94	NA
116	2021-01-24	0.00	135.83	NA
117	2021-01-25	0.00	503.16	NA
118	2021-01-26	0.00	156.40	NA

	Time	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
SI No.				
119	2021-01-27	0.00	122.99	NA
120	2021-01-28	0.00	752.83	NA
121	2021-01-29	0.00	32.60	NA
122	2021-01-30	0.00	93.47	NA
123	2021-01-31	0.00	103.92	NA
124	2021-02-01	0.00	674.49	NA
125	2021-02-02	0.00	18.97	NA
126	2021-02-03	0.00	31.62	NA
127	2021-02-04	0.00	20.36	NA
128	2021-02-05	0.00	44.92	NA
129	2021-02-06	0.00	1.48	NA
130	2021-02-07	0.00	0.75	NA
131	2021-02-08	0.00	125.59	NA
132	2021-02-09	0.00	307.28	NA
133	2021-02-10	0.00	92.71	NA
134	2021-02-11	0.00	348.71	NA
135	2021-02-12	0.00	788.55	NA
136	2021-02-13	0.00	838.94	NA
137	2021-02-14	0.00	259.90	NA
138	2021-02-15	0.00	153.05	NA
139	2021-02-16	0.00	388.81	NA
140	2021-02-17	0.00	382.27	NA
141	2021-02-18	0.00	377.64	NA
142	2021-02-19	0.05	254.43	NA
143	2021-02-20	0.00	100.36	NA
144	2021-02-21	0.00	44.44	NA

	Time	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
SI No.				
145	2021-02-22	0.00	152.01	NA
146	2021-02-23	0.00	161.78	NA
147	2021-02-24	0.00	66.15	NA
148	2021-02-25	0.00	5.72	NA
149	2021-02-26	0.00	113.22	NA
150	2021-02-27	0.00	134.89	NA
151	2021-02-28	0.00	37.12	NA
152	2021-03-01	0.00	503.89	NA
153	2021-03-02	0.00	143.56	NA
154	2021-03-03	0.28	132.03	NA
155	2021-03-04	0.00	22.53	NA
156	2021-03-05	0.00	303.05	NA
157	2021-03-06	0.00	474.14	NA
158	2021-03-07	0.00	722.64	NA
159	2021-03-08	0.00	261.99	NA
160	2021-03-09	0.00	135.00	NA
161	2021-03-10	0.00	60.39	NA
162	2021-03-11	0.00	247.93	NA
163	2021-03-12	0.00	213.91	NA
164	2021-03-13	0.00	28.93	NA
165	2021-03-14	0.00	179.28	NA
166	2021-03-15	0.00	329.13	NA
167	2021-03-16	0.00	384.98	NA
168	2021-03-17	0.00	455.69	NA
169	2021-03-18	0.00	145.33	NA
170	2021-03-19	0.00	299.18	NA



	Time	CEMS_23-PM_U	CEMS_23-SO2_U	CEMS_23-NOx_U
SI No.				
171	2021-03-20	0.00	281.72	NA
172	2021-03-21	NA	NA	NA
173	2021-03-22	0.00	70.99	NA
174	2021-03-23	0.00	195.17	NA
175	2021-03-24	0.00	260.85	NA
176	2021-03-25	0.00	526.93	NA
177	2021-03-26	0.00	249.02	NA
178	2021-03-27	0.00	151.42	NA
179	2021-03-28	0.00	583.39	NA
180	2021-03-29	0.00	129.08	NA
181	2021-03-30	0.00	45.55	NA
182	2021-03-31	0.00	107.89	NA

Report Details: JSPLAngul | 2021-05-25 14:29:01 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_29-PM_U
Prescribed Standards	0 - 100
Maximum Data	44.7
Minimum Data	0.0
Geometric Mean	26.57
Median	26.15
Standard Deviation	10.19
Maximum Value At Time	2021-02-03
Minimum Value At Time	2020-10-20
Valid Data Points	181
Total Data Points	182
Data Availability %	99.45%

	Time	CEMS_29-PM_U
Sl No.		
1	2020-10-01	3.40
2	2020-10-02	19.15
3	2020-10-03	20.41
4	2020-10-04	12.41
5	2020-10-05	18.47
6	2020-10-06	19.93
7	2020-10-07	21.94
8	2020-10-08	20.40
9	2020-10-09	19.50
10	2020-10-10	19.61
11	2020-10-11	20.27
12	2020-10-12	19.85
13	2020-10-13	20.34
14	2020-10-14	20.87

	Time	CEMS_29-PM_U
SI No.		
15	2020-10-15	21.94
16	2020-10-16	22.08
17	2020-10-17	22.01
18	2020-10-18	22.02
19	2020-10-19	12.15
20	2020-10-20	0.00
21	2020-10-21	13.17
22	2020-10-22	17.01
23	2020-10-23	19.72
24	2020-10-24	21.36
25	2020-10-25	14.70
26	2020-10-26	21.70
27	2020-10-27	22.07
28	2020-10-28	22.11
29	2020-10-29	22.02
30	2020-10-30	22.11
31	2020-10-31	22.14
32	2020-11-01	22.22
33	2020-11-02	22.25
34	2020-11-03	22.08
35	2020-11-04	22.12
36	2020-11-05	22.18
37	2020-11-06	22.14
38	2020-11-07	22.18
39	2020-11-08	22.12
40	2020-11-09	22.05

	Time	CEMS_29-PM_U
SI No.		
41	2020-11-10	29.21
42	2020-11-11	36.30
43	2020-11-12	36.31
44	2020-11-13	36.29
45	2020-11-14	36.18
46	2020-11-15	36.21
47	2020-11-16	36.27
48	2020-11-17	36.24
49	2020-11-18	36.31
50	2020-11-19	36.28
51	2020-11-20	36.26
52	2020-11-21	36.28
53	2020-11-22	23.97
54	2020-11-23	36.18
55	2020-11-24	36.14
56	2020-11-25	36.14
57	2020-11-26	36.08
58	2020-11-27	36.13
59	2020-11-28	36.20
60	2020-11-29	36.28
61	2020-11-30	36.14
62	2020-12-01	36.11
63	2020-12-02	36.11
64	2020-12-03	36.14
65	2020-12-04	36.26
66	2020-12-05	36.14

	Time	CEMS_29-PM_U
SI No.		
67	2020-12-06	36.08
68	2020-12-07	36.09
69	2020-12-08	36.13
70	2020-12-09	36.12
71	2020-12-10	36.14
72	2020-12-11	36.18
73	2020-12-12	36.25
74	2020-12-13	36.27
75	2020-12-14	35.96
76	2020-12-15	24.51
77	2020-12-16	31.57
78	2020-12-17	30.16
79	2020-12-18	25.78
80	2020-12-19	25.14
81	2020-12-20	35.98
82	2020-12-21	34.05
83	2020-12-22	34.29
84	2020-12-23	35.92
85	2020-12-24	35.76
86	2020-12-25	35.56
87	2020-12-26	35.89
88	2020-12-27	34.31
89	2020-12-28	31.11
90	2020-12-29	30.93
91	2020-12-30	31.63
92	2020-12-31	33.59

	Time	CEMS_29-PM_U
SI No.		
93	2021-01-01	34.15
94	2021-01-02	35.84
95	2021-01-03	35.15
96	2021-01-04	27.89
97	2021-01-05	22.21
98	2021-01-06	22.66
99	2021-01-07	27.39
100	2021-01-08	31.92
101	2021-01-09	31.30
102	2021-01-10	26.27
103	2021-01-11	26.15
104	2021-01-12	21.90
105	2021-01-13	15.48
106	2021-01-14	20.47
107	2021-01-15	29.90
108	2021-01-16	34.14
109	2021-01-17	35.15
110	2021-01-18	40.49
111	2021-01-19	41.90
112	2021-01-20	37.96
113	2021-01-21	41.63
114	2021-01-22	42.62
115	2021-01-23	42.40
116	2021-01-24	43.07
117	2021-01-25	41.86
118	2021-01-26	42.35

	Time	CEMS_29-PM_U
SI No.		
119	2021-01-27	43.11
120	2021-01-28	42.22
121	2021-01-29	41.57
122	2021-01-30	42.66
123	2021-01-31	42.75
124	2021-02-01	42.91
125	2021-02-02	41.95
126	2021-02-03	44.70
127	2021-02-04	41.50
128	2021-02-05	41.97
129	2021-02-06	40.46
130	2021-02-07	0.00
131	2021-02-08	31.12
132	2021-02-09	34.55
133	2021-02-10	25.28
134	2021-02-11	25.83
135	2021-02-12	28.25
136	2021-02-13	28.25
137	2021-02-14	26.73
138	2021-02-15	26.74
139	2021-02-16	28.58
140	2021-02-17	28.60
141	2021-02-18	28.75
142	2021-02-19	28.79
143	2021-02-20	28.82
144	2021-02-21	17.47

	Time	CEMS_29-PM_U
SI No.		
145	2021-02-22	14.66
146	2021-02-23	14.52
147	2021-02-24	14.76
148	2021-02-25	14.55
149	2021-02-26	14.93
150	2021-02-27	14.76
151	2021-02-28	14.86
152	2021-03-01	14.00
153	2021-03-02	14.78
154	2021-03-03	14.98
155	2021-03-04	15.69
156	2021-03-05	15.19
157	2021-03-06	15.22
158	2021-03-07	14.29
159	2021-03-08	13.89
160	2021-03-09	13.81
161	2021-03-10	12.08
162	2021-03-11	13.30
163	2021-03-12	20.85
164	2021-03-13	14.31
165	2021-03-14	11.10
166	2021-03-15	14.91
167	2021-03-16	13.73
168	2021-03-17	15.15
169	2021-03-18	14.34
170	2021-03-19	14.13



	Time	CEMS_29-PM_U
SI No.		
171	2021-03-20	14.31
172	2021-03-21	NA
173	2021-03-22	13.30
174	2021-03-23	15.96
175	2021-03-24	14.65
176	2021-03-25	14.30
177	2021-03-26	14.13
178	2021-03-27	13.34
179	2021-03-28	14.08
180	2021-03-29	14.31
181	2021-03-30	14.29
182	2021-03-31	14.03

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# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_30-PM_U
Prescribed Standards	0 - 100
Maximum Data	34.28
Minimum Data	2.91
Geometric Mean	15.8
Median	12.36
Standard Deviation	9.29
Maximum Value At Time	2020-10-03
Minimum Value At Time	2021-02-04
Valid Data Points	178
Total Data Points	182
Data Availability %	97.8%

	Time	CEMS_30-PM_U
Sl No.		
1	2020-10-01	32.05
2	2020-10-02	34.16
3	2020-10-03	34.28
4	2020-10-04	27.03
5	2020-10-05	32.99
6	2020-10-06	33.16
7	2020-10-07	29.24
8	2020-10-08	19.93
9	2020-10-09	21.44
10	2020-10-10	30.17
11	2020-10-11	20.01
12	2020-10-12	15.51
13	2020-10-13	7.25
14	2020-10-14	5.20

	Time	CEMS_30-PM_U
SI No.		
15	2020-10-15	4.48
16	2020-10-16	5.33
17	2020-10-17	6.39
18	2020-10-18	6.93
19	2020-10-19	7.71
20	2020-10-20	22.92
21	2020-10-21	22.00
22	2020-10-22	24.12
23	2020-10-23	14.85
24	2020-10-24	5.29
25	2020-10-25	5.27
26	2020-10-26	4.47
27	2020-10-27	5.12
28	2020-10-28	6.64
29	2020-10-29	6.10
30	2020-10-30	5.60
31	2020-10-31	4.60
32	2020-11-01	3.91
33	2020-11-02	4.49
34	2020-11-03	5.51
35	2020-11-04	5.17
36	2020-11-05	4.70
37	2020-11-06	4.64
38	2020-11-07	8.12
39	2020-11-08	8.49
40	2020-11-09	7.86

	Time	CEMS_30-PM_U
SI No.		
41	2020-11-10	9.20
42	2020-11-11	10.00
43	2020-11-12	9.96
44	2020-11-13	16.09
45	2020-11-14	12.19
46	2020-11-15	10.77
47	2020-11-16	13.75
48	2020-11-17	11.23
49	2020-11-18	12.66
50	2020-11-19	12.97
51	2020-11-20	12.38
52	2020-11-21	13.26
53	2020-11-22	10.83
54	2020-11-23	12.64
55	2020-11-24	12.33
56	2020-11-25	13.84
57	2020-11-26	11.69
58	2020-11-27	11.82
59	2020-11-28	15.57
60	2020-11-29	17.27
61	2020-11-30	14.57
62	2020-12-01	25.31
63	2020-12-02	29.80
64	2020-12-03	28.61
65	2020-12-04	27.54
66	2020-12-05	27.53

	Time	CEMS_30-PM_U
SI No.		
67	2020-12-06	27.50
68	2020-12-07	27.52
69	2020-12-08	27.54
70	2020-12-09	27.56
71	2020-12-10	27.57
72	2020-12-11	27.58
73	2020-12-12	27.61
74	2020-12-13	27.57
75	2020-12-14	27.61
76	2020-12-15	27.61
77	2020-12-16	27.61
78	2020-12-17	27.62
79	2020-12-18	27.59
80	2020-12-19	27.54
81	2020-12-20	27.49
82	2020-12-21	27.42
83	2020-12-22	27.41
84	2020-12-23	27.38
85	2020-12-24	27.42
86	2020-12-25	27.42
87	2020-12-26	27.41
88	2020-12-27	27.39
89	2020-12-28	27.41
90	2020-12-29	27.45
91	2020-12-30	27.47
92	2020-12-31	27.46

	Time	CEMS_30-PM_U
SI No.		
93	2021-01-01	27.47
94	2021-01-02	27.47
95	2021-01-03	27.48
96	2021-01-04	27.48
97	2021-01-05	27.48
98	2021-01-06	27.49
99	2021-01-07	27.57
100	2021-01-08	27.57
101	2021-01-09	27.50
102	2021-01-10	27.48
103	2021-01-11	27.46
104	2021-01-12	NA
105	2021-01-13	NA
106	2021-01-14	NA
107	2021-01-15	27.42
108	2021-01-16	25.17
109	2021-01-17	16.45
110	2021-01-18	13.16
111	2021-01-19	16.60
112	2021-01-20	17.02
113	2021-01-21	19.52
114	2021-01-22	24.08
115	2021-01-23	27.15
116	2021-01-24	18.52
117	2021-01-25	9.03
118	2021-01-26	8.80

	Time	CEMS_30-PM_U
SI No.		
119	2021-01-27	16.52
120	2021-01-28	16.45
121	2021-01-29	10.13
122	2021-01-30	15.59
123	2021-01-31	24.50
124	2021-02-01	27.61
125	2021-02-02	21.72
126	2021-02-03	8.18
127	2021-02-04	2.91
128	2021-02-05	6.57
129	2021-02-06	10.11
130	2021-02-07	10.08
131	2021-02-08	10.17
132	2021-02-09	5.39
133	2021-02-10	5.40
134	2021-02-11	10.23
135	2021-02-12	9.43
136	2021-02-13	9.89
137	2021-02-14	10.10
138	2021-02-15	10.18
139	2021-02-16	10.10
140	2021-02-17	9.50
141	2021-02-18	10.28
142	2021-02-19	10.60
143	2021-02-20	10.53
144	2021-02-21	26.27

	Time	CEMS_30-PM_U
SI No.		
145	2021-02-22	9.44
146	2021-02-23	7.64
147	2021-02-24	8.08
148	2021-02-25	10.22
149	2021-02-26	12.08
150	2021-02-27	12.46
151	2021-02-28	9.50
152	2021-03-01	8.98
153	2021-03-02	9.21
154	2021-03-03	8.96
155	2021-03-04	8.67
156	2021-03-05	19.57
157	2021-03-06	8.24
158	2021-03-07	8.04
159	2021-03-08	6.90
160	2021-03-09	16.04
161	2021-03-10	4.50
162	2021-03-11	11.64
163	2021-03-12	3.56
164	2021-03-13	5.15
165	2021-03-14	6.55
166	2021-03-15	6.45
167	2021-03-16	6.42
168	2021-03-17	6.42
169	2021-03-18	6.44
170	2021-03-19	6.41



	Time	CEMS_30-PM_U
SI No.		
171	2021-03-20	6.40
172	2021-03-21	NA
173	2021-03-22	6.42
174	2021-03-23	6.40
175	2021-03-24	6.42
176	2021-03-25	6.42
177	2021-03-26	6.29
178	2021-03-27	6.21
179	2021-03-28	6.27
180	2021-03-29	6.25
181	2021-03-30	6.17
182	2021-03-31	6.14

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# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
Prescribed Standards	0 - 100	0 - 100	0 - 100
Maximum Data	83.69	804.01	334.55
Minimum Data	0.0	14.23	0.0
Geometric Mean	23.81	508.24	181.85
Median	25.68	790.43	180.18
Standard Deviation	14.15	343.8	89.42
Maximum Value At Time	2021-02-03	2020-12-26	2020-10-12
Minimum Value At Time	2020-12-10	2020-10-06	2020-10-01
Valid Data Points	182	182	182
Total Data Points	182	182	182
Data Availability %	100.0%	100.0%	100.0%

	Time	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
SI No.				
1	2020-10-01	26.64	25.75	0.00
2	2020-10-02	25.38	26.21	0.00
3	2020-10-03	27.97	23.91	1.45
4	2020-10-04	27.63	14.31	7.11
5	2020-10-05	27.51	14.31	7.19
6	2020-10-06	30.08	14.23	7.02
7	2020-10-07	25.71	14.52	7.09
8	2020-10-08	16.62	92.56	57.50
9	2020-10-09	16.68	387.22	268.48
10	2020-10-10	15.82	426.96	303.27
11	2020-10-11	15.16	404.20	301.27
12	2020-10-12	15.31	451.77	334.55
13	2020-10-13	16.82	427.04	317.17
14	2020-10-14	21.66	215.76	155.83

	Time	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
SI No.				
15	2020-10-15	21.11	129.59	94.16
16	2020-10-16	16.56	101.63	73.07
17	2020-10-17	15.90	103.96	74.87
18	2020-10-18	15.65	83.45	59.42
19	2020-10-19	20.61	54.14	37.31
20	2020-10-20	21.49	59.56	41.64
21	2020-10-21	19.52	77.96	55.41
22	2020-10-22	25.65	75.21	53.35
23	2020-10-23	15.37	106.93	93.10
24	2020-10-24	13.07	106.61	104.90
25	2020-10-25	13.31	95.05	92.97
26	2020-10-26	13.62	78.59	75.94
27	2020-10-27	14.06	92.86	90.76
28	2020-10-28	14.99	110.04	108.59
29	2020-10-29	15.13	162.82	163.26
30	2020-10-30	14.64	167.87	168.47
31	2020-10-31	14.96	176.65	177.65
32	2020-11-01	14.94	163.54	164.14
33	2020-11-02	13.94	132.50	131.99
34	2020-11-03	14.00	121.46	120.56
35	2020-11-04	12.89	101.16	99.53
36	2020-11-05	12.92	100.24	98.50
37	2020-11-06	13.35	95.82	93.96
38	2020-11-07	14.23	105.44	201.22
39	2020-11-08	14.04	99.52	303.34
40	2020-11-09	17.24	88.21	303.42

	Time	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
SI No.				
41	2020-11-10	34.26	85.14	303.59
42	2020-11-11	38.34	87.47	303.23
43	2020-11-12	36.28	94.85	302.82
44	2020-11-13	37.26	95.69	301.86
45	2020-11-14	36.92	92.22	302.46
46	2020-11-15	41.20	76.57	302.85
47	2020-11-16	42.25	75.22	302.43
48	2020-11-17	43.85	81.98	302.23
49	2020-11-18	41.71	69.39	301.91
50	2020-11-19	43.18	66.32	302.46
51	2020-11-20	48.93	70.88	301.95
52	2020-11-21	40.36	63.48	302.57
53	2020-11-22	29.84	64.01	303.54
54	2020-11-23	27.27	105.14	304.33
55	2020-11-24	28.88	111.07	305.18
56	2020-11-25	27.34	117.38	305.24
57	2020-11-26	27.53	115.04	305.13
58	2020-11-27	30.18	109.73	304.63
59	2020-11-28	25.47	94.71	303.92
60	2020-11-29	26.73	88.38	303.84
61	2020-11-30	27.88	83.98	304.18
62	2020-12-01	26.70	61.18	304.22
63	2020-12-02	25.55	61.53	303.92
64	2020-12-03	27.62	72.53	304.14
65	2020-12-04	25.91	70.90	304.22
66	2020-12-05	27.39	68.11	304.15

	Time	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
SI No.				
67	2020-12-06	28.74	51.84	304.49
68	2020-12-07	29.98	64.47	303.72
69	2020-12-08	32.68	91.03	303.28
70	2020-12-09	13.61	40.73	304.37
71	2020-12-10	0.00	82.69	304.48
72	2020-12-11	15.15	95.12	303.79
73	2020-12-12	35.58	101.86	303.07
74	2020-12-13	33.93	107.49	303.58
75	2020-12-14	32.59	116.83	303.35
76	2020-12-15	36.12	122.74	303.53
77	2020-12-16	35.35	449.27	265.72
78	2020-12-17	32.90	799.61	191.88
79	2020-12-18	34.38	800.05	193.81
80	2020-12-19	33.99	802.25	227.93
81	2020-12-20	33.05	803.72	210.51
82	2020-12-21	35.68	803.18	241.90
83	2020-12-22	32.48	802.70	214.22
84	2020-12-23	32.67	803.38	210.11
85	2020-12-24	32.81	802.31	209.54
86	2020-12-25	30.95	801.86	187.15
87	2020-12-26	32.49	804.01	197.11
88	2020-12-27	32.81	803.41	214.97
89	2020-12-28	35.08	802.53	215.09
90	2020-12-29	37.07	802.24	189.78
91	2020-12-30	33.98	802.33	222.89
92	2020-12-31	35.78	802.04	216.93

	Time	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
SI No.				
93	2021-01-01	33.69	800.79	213.93
94	2021-01-02	35.43	801.52	144.83
95	2021-01-03	34.56	801.53	165.99
96	2021-01-04	35.85	800.90	161.72
97	2021-01-05	35.77	798.53	149.49
98	2021-01-06	35.95	799.55	132.62
99	2021-01-07	35.86	796.71	243.58
100	2021-01-08	34.10	795.82	234.52
101	2021-01-09	34.01	795.16	250.47
102	2021-01-10	33.17	794.36	246.45
103	2021-01-11	34.81	794.97	228.63
104	2021-01-12	43.90	800.25	69.76
105	2021-01-13	49.25	801.79	59.52
106	2021-01-14	35.28	798.90	104.16
107	2021-01-15	35.79	800.98	125.40
108	2021-01-16	36.13	801.35	100.49
109	2021-01-17	39.47	801.72	254.64
110	2021-01-18	40.87	801.38	227.09
111	2021-01-19	43.62	797.93	259.13
112	2021-01-20	41.60	796.90	192.18
113	2021-01-21	44.79	795.21	228.26
114	2021-01-22	44.36	798.54	90.95
115	2021-01-23	44.17	798.65	84.98
116	2021-01-24	45.06	798.70	103.49
117	2021-01-25	43.83	799.25	76.97
118	2021-01-26	45.09	797.87	90.18

	Time	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
SI No.				
119	2021-01-27	42.02	798.68	100.38
120	2021-01-28	6.67	798.77	144.50
121	2021-01-29	2.49	801.21	109.40
122	2021-01-30	3.44	798.20	138.48
123	2021-01-31	3.01	799.95	140.93
124	2021-02-01	2.84	800.90	135.17
125	2021-02-02	10.56	799.48	138.28
126	2021-02-03	83.69	800.43	105.37
127	2021-02-04	43.83	800.00	106.95
128	2021-02-05	40.88	799.80	130.75
129	2021-02-06	43.80	797.91	99.27
130	2021-02-07	35.81	801.12	65.77
131	2021-02-08	42.01	796.06	37.13
132	2021-02-09	37.98	800.71	36.10
133	2021-02-10	42.42	800.30	48.30
134	2021-02-11	22.26	798.98	162.99
135	2021-02-12	27.68	797.21	183.48
136	2021-02-13	4.86	796.10	197.88
137	2021-02-14	6.58	795.92	167.37
138	2021-02-15	5.32	795.58	202.25
139	2021-02-16	9.65	796.69	207.82
140	2021-02-17	6.65	798.17	194.32
141	2021-02-18	11.44	797.30	209.31
142	2021-02-19	8.65	797.68	228.51
143	2021-02-20	32.68	801.83	103.58
144	2021-02-21	40.71	800.27	208.41

	Time	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
SI No.				
145	2021-02-22	17.07	795.50	266.68
146	2021-02-23	12.89	793.81	264.39
147	2021-02-24	6.42	791.41	234.28
148	2021-02-25	5.90	790.70	226.91
149	2021-02-26	5.50	789.30	136.94
150	2021-02-27	5.88	788.65	153.21
151	2021-02-28	6.53	789.88	155.65
152	2021-03-01	7.13	788.58	167.46
153	2021-03-02	6.39	792.90	135.53
154	2021-03-03	5.26	790.55	150.13
155	2021-03-04	9.23	792.92	154.54
156	2021-03-05	7.00	792.19	160.63
157	2021-03-06	6.07	790.80	168.61
158	2021-03-07	7.54	792.01	179.52
159	2021-03-08	6.77	796.70	129.70
160	2021-03-09	24.97	796.98	110.60
161	2021-03-10	7.01	794.00	138.65
162	2021-03-11	8.87	795.84	134.91
163	2021-03-12	20.10	800.17	33.27
164	2021-03-13	9.14	799.04	124.03
165	2021-03-14	5.74	796.90	130.17
166	2021-03-15	11.13	796.12	131.92
167	2021-03-16	6.34	793.48	182.74
168	2021-03-17	5.64	792.84	196.43
169	2021-03-18	5.44	791.46	112.01
170	2021-03-19	5.52	790.02	110.05



	Time	CEMS_28-PM_U	CEMS_28-SO2_U	CEMS_28-NOx_U
SI No.				
171	2021-03-20	6.03	789.24	105.01
172	2021-03-21	6.76	786.42	111.61
173	2021-03-22	5.47	787.84	110.50
174	2021-03-23	8.21	790.31	180.84
175	2021-03-24	9.31	790.18	190.08
176	2021-03-25	6.51	789.22	194.87
177	2021-03-26	5.51	790.97	194.41
178	2021-03-27	6.52	793.05	218.93
179	2021-03-28	5.27	790.96	157.39
180	2021-03-29	9.14	788.59	149.28
181	2021-03-30	6.93	786.12	194.32
182	2021-03-31	6.60	783.94	170.66

**Report Details:** JSPLAngul | 2021-05-25 14:39:48 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Jindal Steel and Power Ltd.

Report: Custom Report

From Date: 2020/10/01 00:00:00 To Date : 2021/03/31 23:59:51

Description	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
Prescribed Standards	0 - 100	0 - 100	0 - 100
Maximum Data	49.59	20.82	16.49
Minimum Data	12.3	11.88	8.81
Geometric Mean	28.01	16.11	9.95
Median	29.13	16.62	9.82
Standard Deviation	6.52	2.39	0.76
Maximum Value At Time	2021-03-28	2021-03-29	2020-10-15
Minimum Value At Time	2020-10-30	2020-11-26	2021-02-07
Valid Data Points	182	168	168
Total Data Points	182	182	182
Data Availability %	100.0%	92.31%	92.31%

	Time	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
SI No.				
1	2020-10-01	32.84	NA	NA
2	2020-10-02	29.86	NA	NA
3	2020-10-03	31.40	NA	NA
4	2020-10-04	31.43	NA	NA
5	2020-10-05	18.72	NA	NA
6	2020-10-06	21.96	NA	NA
7	2020-10-07	26.49	NA	NA
8	2020-10-08	22.35	NA	NA
9	2020-10-09	20.85	NA	NA
10	2020-10-10	19.88	NA	NA
11	2020-10-11	22.29	NA	NA
12	2020-10-12	14.70	NA	NA
13	2020-10-13	17.06	NA	NA
14	2020-10-14	23.80	NA	NA

	Time	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
SI No.				
15	2020-10-15	21.37	14.13	16.49
16	2020-10-16	16.57	14.63	11.25
17	2020-10-17	15.94	14.68	11.27
18	2020-10-18	24.60	15.00	11.48
19	2020-10-19	19.96	15.40	11.71
20	2020-10-20	19.71	15.33	11.68
21	2020-10-21	23.76	15.49	11.67
22	2020-10-22	23.54	14.84	11.14
23	2020-10-23	26.21	15.32	11.48
24	2020-10-24	17.61	13.86	10.46
25	2020-10-25	22.04	14.63	11.03
26	2020-10-26	19.18	13.90	10.37
27	2020-10-27	16.17	13.59	10.11
28	2020-10-28	13.56	13.30	9.92
29	2020-10-29	13.01	13.05	9.72
30	2020-10-30	12.30	13.06	9.72
31	2020-10-31	12.36	13.51	10.16
32	2020-11-01	13.73	14.00	10.65
33	2020-11-02	22.79	14.50	10.99
34	2020-11-03	18.48	13.77	10.42
35	2020-11-04	19.99	13.77	10.46
36	2020-11-05	17.20	13.44	10.12
37	2020-11-06	15.86	13.15	9.87
38	2020-11-07	14.83	12.74	9.57
39	2020-11-08	20.37	12.51	9.42
40	2020-11-09	18.04	12.97	10.11

	Time	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
SI No.				
41	2020-11-10	18.76	12.55	9.74
42	2020-11-11	21.86	13.19	10.05
43	2020-11-12	23.28	13.38	10.36
44	2020-11-13	19.54	13.55	10.27
45	2020-11-14	21.40	13.51	10.21
46	2020-11-15	23.03	13.65	10.34
47	2020-11-16	21.37	13.73	10.43
48	2020-11-17	22.66	13.69	10.43
49	2020-11-18	25.54	13.92	10.56
50	2020-11-19	22.52	13.83	10.42
51	2020-11-20	22.13	13.74	10.35
52	2020-11-21	24.89	13.72	10.40
53	2020-11-22	27.24	13.22	10.19
54	2020-11-23	24.76	12.57	9.65
55	2020-11-24	29.10	11.92	9.00
56	2020-11-25	28.00	12.46	9.98
57	2020-11-26	28.46	11.88	9.18
58	2020-11-27	30.19	12.46	9.62
59	2020-11-28	28.51	13.16	10.12
60	2020-11-29	29.73	12.83	9.92
61	2020-11-30	29.40	12.98	10.36
62	2020-12-01	30.77	12.30	9.81
63	2020-12-02	33.10	12.83	10.09
64	2020-12-03	28.89	12.36	9.91
65	2020-12-04	30.77	12.31	9.62
66	2020-12-05	32.06	12.73	10.39

	Time	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
SI No.				
67	2020-12-06	29.14	12.58	9.92
68	2020-12-07	30.68	12.72	9.76
69	2020-12-08	31.06	12.82	9.72
70	2020-12-09	31.19	12.94	9.83
71	2020-12-10	28.29	12.91	10.03
72	2020-12-11	30.11	12.57	9.65
73	2020-12-12	28.07	12.98	9.99
74	2020-12-13	31.28	12.37	9.44
75	2020-12-14	29.72	13.38	10.28
76	2020-12-15	32.78	13.31	10.29
77	2020-12-16	29.19	13.21	10.14
78	2020-12-17	31.58	14.46	9.85
79	2020-12-18	24.72	16.48	9.01
80	2020-12-19	32.04	16.45	9.51
81	2020-12-20	32.25	16.89	9.31
82	2020-12-21	31.62	16.48	9.74
83	2020-12-22	27.42	16.15	9.08
84	2020-12-23	25.17	17.01	9.62
85	2020-12-24	28.99	16.81	9.87
86	2020-12-25	26.34	16.75	9.50
87	2020-12-26	31.08	16.49	9.55
88	2020-12-27	28.94	16.69	9.50
89	2020-12-28	30.33	16.43	9.34
90	2020-12-29	39.43	16.44	9.46
91	2020-12-30	32.94	15.95	9.09
92	2020-12-31	29.54	16.25	9.55

	Time	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
SI No.				
93	2021-01-01	32.21	15.79	9.17
94	2021-01-02	32.25	16.48	9.71
95	2021-01-03	29.12	17.34	9.87
96	2021-01-04	34.02	17.29	9.96
97	2021-01-05	26.60	17.31	9.94
98	2021-01-06	28.95	17.22	9.63
99	2021-01-07	28.40	16.92	9.41
100	2021-01-08	27.50	17.77	9.78
101	2021-01-09	31.87	17.56	9.58
102	2021-01-10	31.32	17.08	9.27
103	2021-01-11	33.52	17.37	9.44
104	2021-01-12	31.83	17.32	9.40
105	2021-01-13	29.05	17.00	9.30
106	2021-01-14	32.72	16.45	9.05
107	2021-01-15	33.72	17.25	9.61
108	2021-01-16	27.82	17.71	9.75
109	2021-01-17	32.83	16.10	9.22
110	2021-01-18	34.87	16.67	9.28
111	2021-01-19	34.97	16.56	9.14
112	2021-01-20	31.73	16.99	9.29
113	2021-01-21	29.63	17.09	9.38
114	2021-01-22	27.09	16.88	9.68
115	2021-01-23	29.72	16.58	9.52
116	2021-01-24	30.29	16.56	9.39
117	2021-01-25	33.33	17.00	9.50
118	2021-01-26	34.07	18.21	10.23

	Time	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
SI No.				
119	2021-01-27	33.22	17.92	9.85
120	2021-01-28	32.28	17.61	9.63
121	2021-01-29	31.17	16.16	8.84
122	2021-01-30	34.59	16.35	8.99
123	2021-01-31	32.49	17.20	9.71
124	2021-02-01	32.20	16.52	9.19
125	2021-02-02	32.21	16.66	9.33
126	2021-02-03	33.10	17.16	9.73
127	2021-02-04	24.02	16.80	9.83
128	2021-02-05	29.39	17.05	9.57
129	2021-02-06	20.96	17.13	9.57
130	2021-02-07	29.76	15.94	8.81
131	2021-02-08	32.90	18.15	10.05
132	2021-02-09	32.37	17.47	9.69
133	2021-02-10	30.05	17.09	9.81
134	2021-02-11	27.59	17.06	9.63
135	2021-02-12	37.02	17.25	9.54
136	2021-02-13	37.60	17.57	9.64
137	2021-02-14	36.69	17.46	9.56
138	2021-02-15	31.15	17.35	9.43
139	2021-02-16	29.10	17.86	9.77
140	2021-02-17	22.89	17.11	9.20
141	2021-02-18	25.27	17.11	9.16
142	2021-02-19	32.79	17.42	9.44
143	2021-02-20	32.81	16.69	9.02
144	2021-02-21	33.81	17.28	9.45

	Time	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
SI No.				
145	2021-02-22	32.17	17.32	9.36
146	2021-02-23	38.64	17.74	9.56
147	2021-02-24	33.03	18.07	9.61
148	2021-02-25	28.24	18.10	9.55
149	2021-02-26	25.38	18.51	9.67
150	2021-02-27	26.78	18.61	9.87
151	2021-02-28	26.76	18.75	9.90
152	2021-03-01	33.65	19.35	10.09
153	2021-03-02	27.82	18.27	9.64
154	2021-03-03	37.00	18.97	9.95
155	2021-03-04	29.11	18.16	9.58
156	2021-03-05	29.76	18.52	9.86
157	2021-03-06	31.10	18.59	9.76
158	2021-03-07	32.02	18.17	9.67
159	2021-03-08	36.63	18.43	9.99
160	2021-03-09	24.90	18.09	9.86
161	2021-03-10	21.61	18.98	10.16
162	2021-03-11	30.51	19.70	10.54
163	2021-03-12	15.30	18.59	9.92
164	2021-03-13	19.55	18.22	9.82
165	2021-03-14	20.64	18.46	9.80
166	2021-03-15	33.05	19.51	10.44
167	2021-03-16	33.73	19.76	10.40
168	2021-03-17	28.93	19.57	10.24
169	2021-03-18	25.80	19.94	10.61
170	2021-03-19	31.10	19.50	10.13



	Time	CEMS_12-PM_U	CEMS_12-SO2_U	CEMS_12-NOx_U
SI No.				
171	2021-03-20	28.40	19.32	10.02
172	2021-03-21	33.71	19.96	10.48
173	2021-03-22	35.22	20.23	10.71
174	2021-03-23	35.53	19.87	10.47
175	2021-03-24	32.46	19.70	10.26
176	2021-03-25	36.15	20.32	10.47
177	2021-03-26	37.52	20.41	10.63
178	2021-03-27	42.29	19.95	10.41
179	2021-03-28	49.59	19.71	10.33
180	2021-03-29	45.57	20.82	10.82
181	2021-03-30	36.39	20.53	10.57
182	2021-03-31	40.25	20.78	10.42

**Report Details:** JSPLAngul | 2021-05-25 14:22:23 | Custom Report

Ref. No. EMD/LAB/MEF/21-22/01


Date: 05.05.2020

**Monthly Summary of Online Ambient Air Quality Monitoring Report**  
**(Oct'20 – Mar'21)**

Month	Location		PM10	PM2.5	SO2	NOx	NO2	CO	NH3	O3	BENZ
			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Oct	Central Utility Building	Min	55.1	19.5	6.1	9.7	4.6	0.4	4.5	3.2	0.0
		Max	73.5	29.4	7.2	10.4	5.4	0.8	5.1	4.2	0.0
		Avg.	62.9	22.9	6.7	10.0	4.9	0.5	4.9	3.7	0.0
		SD	5.0	2.4	0.4	0.2	0.2	0.1	0.1	0.3	0.0
	CGP	Min	53.8	17.5	6.3	12.6	4.0	0.3	6.3	10.5	0.0
		Max	75.4	25.9	11.0	20.4	6.8	0.8	10.1	17.4	0.0
		Avg.	63.1	21.4	8.7	15.3	5.2	0.5	8.2	12.4	0.0
		SD	5.1	2.4	1.3	1.8	0.8	0.1	1.2	1.5	0.0
	Security Barrack	Min	54.2	16.8	7.9	6.9	4.0	0.4	2.9	9.0	0.0
		Max	76.8	32.6	8.4	8.9	7.0	0.8	5.3	13.6	0.0
		Avg.	64.8	23.8	8.2	8.3	5.4	0.5	3.7	11.3	0.0
		SD	6.9	4.5	0.1	0.4	0.5	0.1	0.5	1.0	0.0
	Township	Min	54.1	18.1	10.9	10.9	3.0	0.4	5.0	4.5	0.0
		Max	72.3	25.8	16.9	16.9	5.8	0.8	7.3	5.3	0.0
		Avg.	61.3	21.5	14.3	13.8	4.5	0.5	6.0	4.9	0.0
		SD	3.8	1.6	1.7	1.4	0.8	0.1	0.6	0.2	0.0
Nov	Central Utility Building	Min	57.5	19.2	5.9	9.7	4.7	0.3	4.5	3.3	0.0
		Max	76.5	29.5	7.2	10.3	5.3	0.8	5.2	5.2	0.0
		Avg.	64.9	24.0	6.5	10.0	4.9	0.5	4.9	3.9	0.0
		SD	4.3	2.8	0.3	0.2	0.1	0.1	0.2	0.4	0.0
	CGP	Min	54.9	17.0	6.3	13.4	3.8	0.3	5.8	8.9	0.0
		Max	79.4	31.2	13.2	23.5	6.3	0.9	11.8	14.3	0.0
		Avg.	65.2	22.8	9.2	18.0	5.0	0.5	7.7	11.7	0.0
		SD	5.4	3.7	1.7	2.9	0.7	0.2	1.5	1.4	0.0
	Security Barrack	Min	59.0	16.3	7.9	5.9	5.1	0.4	3.0	9.5	0.0
		Max	79.1	31.9	8.4	9.2	6.1	0.8	4.9	14.6	0.0
		Avg.	68.2	24.2	8.2	8.2	5.7	0.6	3.8	11.6	0.0
		SD	6.2	3.8	0.1	0.5	0.3	0.1	0.5	1.3	0.0
	Township	Min	55.4	19.7	10.2	9.8	3.0	0.4	5.1	4.7	0.0
		Max	73.6	28.5	16.9	15.8	5.4	0.8	9.6	5.5	0.0
		Avg.	63.7	23.1	13.7	11.8	4.2	0.5	6.8	5.1	0.0
		SD	5.3	2.6	1.9	1.5	0.7	0.1	1.2	0.2	0.0

Month	Location		PM10	PM2.5	SO2	NOx	NO2	CO	NH3	O3	BENZ
			µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3
Dec	Central Utility Building	Min	53.9	20.6	5.8	9.7	4.5	0.2	4.6	3.1	0.0
		Max	74.5	32.8	7.6	10.4	5.6	0.9	5.2	4.3	0.0
		Avg.	66.6	24.1	6.5	10.1	5.0	0.5	5.0	3.6	0.0
		SD	4.8	3.0	0.4	0.2	0.2	0.1	0.1	0.3	0.0
	CGP	Min	56.8	22.0	9.2	10.9	3.0	0.3	7.1	9.2	0.0
		Max	76.1	35.6	13.7	17.0	6.2	0.8	11.1	13.5	0.0
		Avg.	66.0	26.5	10.9	14.5	5.2	0.6	9.1	11.4	0.0
		SD	5.0	3.3	1.0	1.4	0.6	0.1	1.0	1.2	0.0
	Security Barrack	Min	58.1	20.5	7.9	7.5	5.2	0.3	3.1	8.2	0.0
		Max	80.0	33.4	8.3	9.5	5.9	0.8	4.9	12.5	0.0
		Avg.	69.1	27.1	8.2	8.3	5.6	0.5	3.9	10.3	0.0
		SD	5.5	3.3	0.1	0.4	0.2	0.1	0.5	1.2	0.0
	Township	Min	54.3	20.8	6.9	9.5	3.0	0.3	7.2	5.0	0.0
		Max	73.9	31.2	16.7	13.2	4.6	1.0	10.4	5.4	0.0
		Avg.	63.0	24.6	10.5	11.0	3.6	0.6	8.7	5.2	0.0
		SD	4.4	2.8	2.7	0.9	0.4	0.2	0.8	0.1	0.0
Jan	Central Utility Building	Min	58.3	21.4	5.9	9.6	4.6	0.3	4.7	3.3	0.0
		Max	77.5	31.6	7.3	10.3	5.2	0.8	5.2	4.6	0.0
		Avg.	67.9	26.1	6.5	10.0	4.9	0.5	5.0	3.9	0.0
		SD	4.8	2.6	0.3	0.2	0.2	0.1	0.1	0.4	0.0
	CGP	Min	56.8	18.9	8.0	11.1	2.8	0.4	5.8	10.6	0.0
		Max	82.8	35.3	12.3	18.5	5.4	0.9	11.8	17.1	0.0
		Avg.	67.1	24.6	9.8	14.7	4.1	0.6	8.9	13.3	0.0
		SD	6.5	3.3	1.3	1.8	0.7	0.1	1.4	1.6	0.0
	Security Barrack	Min	62.0	20.6	7.9	6.9	4.3	0.4	3.5	10.9	0.0
		Max	80.3	34.8	8.4	10.8	7.4	0.8	7.4	18.3	0.0
		Avg.	70.1	26.3	8.2	8.7	5.6	0.5	5.5	13.9	0.0
		SD	4.3	3.4	0.1	0.9	0.7	0.1	0.7	1.5	0.0
	Township	Min	57.2	19.8	4.7	9.9	2.6	0.4	7.3	4.9	0.0
		Max	76.8	27.9	10.2	14.3	3.9	0.9	10.9	5.4	0.0
		Avg.	64.8	24.1	7.2	11.4	3.3	0.6	9.0	5.1	0.0
		SD	4.6	2.1	1.5	0.9	0.3	0.1	1.0	0.1	0.0

Month	Location		PM10	PM2.5	SO2	NOx	NO2	CO	NH3	O3	BENZ
			µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	mg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Feb	Central Utility Building	Min	61.9	23.9	6.0	9.7	4.6	0.3	4.6	4.0	0.0
		Max	79.5	32.7	7.2	10.2	5.2	0.8	7.5	7.2	0.0
		Avg.	69.8	27.4	6.5	9.9	5.0	0.5	5.0	5.6	0.0
		SD	5.1	2.3	0.3	0.1	0.2	0.1	0.5	1.3	0.0
	CGP	Min	55.9	21.7	8.8	10.0	2.8	0.4	8.8	10.9	0.0
		Max	84.7	42.9	14.6	18.8	4.3	0.9	12.7	17.8	0.0
		Avg.	70.5	31.0	10.8	13.1	3.4	0.6	10.3	14.3	0.0
		SD	7.3	6.0	1.7	1.9	0.4	0.1	1.0	1.7	0.0
	Security Barrack	Min	61.4	23.0	7.6	8.5	5.0	0.4	4.2	9.8	0.0
		Max	90.6	35.9	8.5	10.7	7.0	0.9	8.1	16.8	0.0
		Avg.	76.1	28.8	8.1	9.3	5.6	0.6	5.7	13.5	0.0
		SD	7.0	3.5	0.2	0.4	0.4	0.1	0.8	1.6	0.0
	Township	Min	59.8	22.2	3.7	9.7	2.8	0.4	6.8	4.6	0.0
		Max	74.5	34.7	8.4	11.9	3.5	0.8	10.1	5.3	0.0
		Avg.	67.6	27.2	5.7	10.7	3.1	0.6	8.7	5.0	0.0
		SD	3.5	3.3	1.0	0.6	0.2	0.1	0.8	0.2	0.0
Mar	Central Utility Building	Min	58.3	26.7	5.8	9.6	4.6	0.4	4.7	5.0	0.0
		Max	92.9	45.8	8.1	10.4	5.2	0.9	5.2	7.0	0.0
		Avg.	70.6	35.6	6.3	9.9	4.9	0.5	5.0	5.9	0.0
		SD	7.7	4.5	0.4	0.2	0.2	0.1	0.1	0.5	0.0
	CGP	Min	62.4	28.6	7.9	7.0	3.1	0.4	3.4	8.3	0.0
		Max	93.5	50.0	13.3	10.9	4.4	0.9	7.3	14.9	0.0
		Avg.	73.0	38.6	9.6	9.0	3.5	0.6	4.9	11.5	0.0
		SD	7.4	5.9	1.4	0.9	0.3	0.1	0.9	1.8	0.0
	Security Barrack	Min	64.3	27.5	7.3	8.2	3.4	0.4	5.2	9.7	0.0
		Max	92.8	46.4	8.0	12.8	7.4	0.9	8.0	17.4	0.0
		Avg.	76.3	39.1	7.6	9.7	5.5	0.6	6.4	14.1	0.0
		SD	6.4	5.2	0.2	1.2	0.9	0.1	0.8	1.8	0.0
	Township	Min	59.8	25.5	4.7	10.2	2.7	0.3	6.8	4.5	0.0
		Max	75.4	45.8	8.4	14.3	5.7	0.9	9.4	4.8	0.0
		Avg.	68.0	31.1	6.5	11.2	3.2	0.5	7.8	4.7	0.0
		SD	4.5	4.2	0.8	0.8	0.5	0.1	0.7	0.1	0.0

  
Lab (I/C)

  
HOD (EMD)



Ref. No.: EMD/LAB/2020-21/205

Date: 17.03.2021

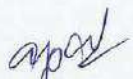
**FUGITIVE DUST MONITORING REPORT**

(March 2021)

Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
1	02.03.21	Power Plant ash silo	90
2	02.03.21	Process Boiler ash silo	93
3	02.03.21	HESS plant raw material area	84
4	02.03.21	HESS plant product storage area	82
5	02.03.21	LWA plant raw material area	81
6	02.03.21	LWA plant product storage area	82
7	03.03.21	CGP ash silo	81
8	03.03.21	Coal Washery outside office	91
9	03.03.21	Coal Washery near yard	93
10	03.03.21	Oxygen Plant outside office	89
11	04.03.21	DRI near furnace	83
12	04.03.21	DRI outside control room	81
13	04.03.21	LDP outside control room	91
14	04.03.21	LDP near kiln	81
15	04.03.21	LDP product handling area	92
16	05.03.21	Plate Mill outside office	81
17	05.03.21	Plate Mill near furnace	87
18	05.03.21	Plate Mill storage area	82
19	05.03.21	Bar Mill outside office	76
20	05.03.21	Bar Mill near furnace	71
21	05.03.21	Bar Mill storage area	89
22	08.03.21	SMS outside EAF control room	89
23	08.03.21	SMS outside LF control room	84
24	08.03.21	SMS outside water complex office	91
25	08.03.21	SMS near thickener	80
26	08.03.21	SMS near propane storage area	82
27	08.03.21	Near BOF converter	96
28	08.03.21	Outside BOF office	91
29	08.03.21	Outside Granshot control room	92
30	09.03.21	SSD outside office	81
31	09.03.21	SSD inside workshop	83
32	09.03.21	Coke Oven near coal blending bins	91
33	09.03.21	Coke Oven near coal crusher	94



Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
34	09.03.21	Coke Oven near coal mixer	95
35	09.03.21	Coke Oven near coal tower	91
36	10.03.21	Coke Oven near Battery 1	82
37	10.03.21	Coke Oven near Battery 2	94
38	10.03.21	Coke Oven near Battery 3	92
39	10.03.21	Coke Oven near Battery 4	90
40	11.03.21	Coke Oven near quenching tower 1	94
41	11.03.21	Coke Oven near quenching tower 2	91
42	11.03.21	Coke Oven near coke cutting & screening house	93
43	11.03.21	Coke Oven byproduct area	87
44	12.03.21	Blast Furnace near stock house	93
45	12.03.21	Blast Furnace taphole 1 & 2 side	94
46	12.03.21	Blast Furnace taphole 3 & 4 side	92
47	13.03.21	Sinter Plant coke building	94
48	13.03.21	Sinter Plant flux building	93
49	13.03.21	Sinter Plant crusher building	90
50	13.03.21	Sinter Plant screening building	82
51	13.03.21	Sinter Plant proportionate building	85
52	13.03.21	Sinter Plant outside control room	88
53	15.03.21	RMHS package 1 yard	92
54	15.03.21	Junction House 3	90
55	15.03.21	Junction House 5	94
56	15.03.21	Junction House 8	88
57	15.03.21	Junction House 10	87
58	15.03.21	Junction House 12	93
59	16.03.21	RMHS package 6 yard	96
60	16.03.21	Junction House 17	91
61	16.03.21	Junction House 20	90
62	16.03.21	RMHS package 8 yard	94

  
Lab (I/C)

  
HOD (EMD)



Ref. No.: EMD/LAB/2020-21/188

Date: 24.02.2021

**FUGITIVE DUST MONITORING REPORT**

(February 2021)

Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
1	03.02.21	Power Plant ash silo	94
2	03.02.21	Process Boiler ash silo	90
3	03.02.21	HESS plant raw material area	81
4	03.02.21	HESS plant product storage area	80
5	03.02.21	LWA plant raw material area	85
6	03.02.21	LWA plant product storage area	83
7	04.02.21	CGP ash silo	86
8	04.02.21	Coal Washery outside office	82
9	04.02.21	Coal Washery near yard	86
10	04.02.21	Oxygen Plant outside office	88
11	05.02.21	DRI near furnace	87
12	05.02.21	DRI outside control room	84
13	05.02.21	LDP outside control room	90
14	05.02.21	LDP near kiln	84
15	05.02.21	LDP product handling area	82
16	08.02.21	Plate Mill outside office	86
17	08.02.21	Plate Mill near furnace	89
18	08.02.21	Plate Mill storage area	84
19	08.02.21	Bar Mill outside office	77
20	08.02.21	Bar Mill near furnace	74
21	08.02.21	Bar Mill storage area	85
22	09.02.21	SMS outside EAF control room	87
23	09.02.21	SMS outside LF control room	88
24	09.02.21	SMS outside water complex office	94
25	09.02.21	SMS near thickener	82
26	09.02.21	SMS near propane storage area	86
27	10.02.21	Near BOF converter	91
28	10.02.21	Outside BOF office	96
29	10.02.21	Outside Granshot control room	82
30	10.02.21	SSD outside office	84
31	10.02.21	SSD inside workshop	74
32	11.02.21	Coke Oven near coal blending bins	94
33	11.02.21	Coke Oven near coal crusher	89



Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
34	11.02.21	Coke Oven near coal mixer	93
35	11.02.21	Coke Oven near coal tower	90
36	12.02.21	Coke Oven near Battery 1	87
37	12.02.21	Coke Oven near Battery 2	91
38	12.02.21	Coke Oven near Battery 3	90
39	12.02.21	Coke Oven near Battery 4	88
40	15.02.21	Coke Oven near quenching tower 1	92
41	15.02.21	Coke Oven near quenching tower 2	87
42	15.02.21	Coke Oven near coke cutting & screening house	81
43	15.02.21	Coke Oven byproduct area	87
44	16.02.21	Blast Furnace near stock house	90
45	16.02.21	Blast Furnace taphole 1 & 2 side	92
46	16.02.21	Blast Furnace taphole 3 & 4 side	88
47	17.02.21	Sinter Plant coke building	92
48	17.02.21	Sinter Plant flux building	92
49	17.02.21	Sinter Plant crusher building	91
50	17.02.21	Sinter Plant screening building	87
51	17.02.21	Sinter Plant proportionate building	89
52	17.02.21	Sinter Plant outside control room	90
53	18.02.21	RMHS package 1 yard	97
54	18.02.21	Junction House 3	91
55	18.02.21	Junction House 5	89
56	18.02.21	Junction House 8	94
57	18.02.21	Junction House 10	91
58	18.02.21	Junction House 12	90
59	22.02.21	RMHS package 6 yard	87
60	22.02.21	Junction House 17	89
61	22.02.21	Junction House 20	93
62	22.02.21	RMHS package 8 yard	92

*apal*  
Lab (I/C)

*AB*  
HOD (EMD)



Ref. No.: EMD/LAB/2020-21/171

Date: 20.01.2021

**FUGITIVE DUST MONITORING REPORT**

(January 2021)

Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
1	04.01.21	Power Plant ash silo	84
2	04.01.21	Process Boiler ash silo	91
3	04.01.21	HESS plant raw material area	85
4	04.01.21	HESS plant product storage area	88
5	04.01.21	LWA plant raw material area	89
6	04.01.21	LWA plant product storage area	92
7	05.01.21	CGP ash silo	81
8	05.01.21	Coal Washery outside office	88
9	05.01.21	Coal Washery near yard	93
10	05.01.21	Oxygen Plant outside office	74
11	06.01.21	DRI near furnace	84
12	06.01.21	DRI outside control room	82
13	06.01.21	LDP outside control room	94
14	06.01.21	LDP near kiln	93
15	06.01.21	LDP product handling area	97
16	07.01.21	Plate Mill outside office	79
17	07.01.21	Plate Mill near furnace	77
18	07.01.21	Plate Mill storage area	71
19	07.01.21	Bar Mill outside office	72
20	07.01.21	Bar Mill near furnace	69
21	07.01.21	Bar Mill storage area	76
22	08.01.21	SMS outside EAF control room	83
23	08.01.21	SMS outside LF control room	85
24	08.01.21	SMS outside water complex office	80
25	08.01.21	SMS near thickener	78
26	08.01.21	SMS near propane storage area	76
27	09.01.21	Near BOF converter	83
28	09.01.21	Outside BOF office	81
29	09.01.21	Outside Granshot control room	89
30	09.01.21	SSD outside office	76
31	09.01.21	SSD inside workshop	71
32	11.01.21	Coke Oven near coal blending bins	83
33	11.01.21	Coke Oven near coal crusher	86



Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
34	11.01.21	Coke Oven near coal mixer	89
35	11.01.21	Coke Oven near coal tower	92
36	12.01.21	Coke Oven near Battery 1	90
37	12.01.21	Coke Oven near Battery 2	86
38	12.01.21	Coke Oven near Battery 3	94
39	12.01.21	Coke Oven near Battery 4	87
40	13.01.21	Coke Oven near quenching tower 1	93
41	13.01.21	Coke Oven near quenching tower 2	97
42	13.01.21	Coke Oven near coke cutting & screening house	83
43	13.01.21	Coke Oven byproduct area	84
44	14.01.21	Blast Furnace near stock house	95
45	14.01.21	Blast Furnace taphole 1 & 2 side	90
46	14.01.21	Blast Furnace taphole 3 & 4 side	83
47	15.01.21	Sinter Plant coke building	91
48	15.01.21	Sinter Plant flux building	96
49	15.01.21	Sinter Plant crusher building	94
50	15.01.21	Sinter Plant screening building	92
51	15.01.21	Sinter Plant proportionate building	90
52	15.01.21	Sinter Plant outside control room	89
53	18.01.21	RMHS package 1 yard	93
54	18.01.21	Junction House 3	94
55	18.01.21	Junction House 5	97
56	18.01.21	Junction House 8	90
57	18.01.21	Junction House 10	88
58	18.01.21	Junction House 12	89
59	19.01.21	RMHS package 6 yard	93
60	19.01.21	Junction House 17	92
61	19.01.21	Junction House 20	90
62	19.01.21	RMHS package 8 yard	91

*apal*  
Lab (I/C)

*Alka*  
HOD (EMD)



Ref. No.: EMD/LAB/2020-21/154

Date: 21.12.2020

**FUGITIVE DUST MONITORING REPORT**

(December 2020)

Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
1	07.12.20	Power Plant ash silo	83
2	07.12.20	Process Boiler ash silo	80
3	07.12.20	HESS plant raw material area	84
4	07.12.20	HESS plant product storage area	83
5	07.12.20	LWA plant raw material area	81
6	07.12.20	LWA plant product storage area	73
7	08.12.20	CGP ash silo	71
8	08.12.20	Coal Washery outside office	81
9	08.12.20	Coal Washery near yard	83
10	08.12.20	Oxygen Plant outside office	84
11	08.12.20	DRI near furnace	93
12	08.12.20	DRI outside control room	87
13	08.12.20	LDP outside control room	81
14	08.12.20	LDP near kiln	92
15	08.12.20	LDP product handling area	96
16	09.12.20	Plate Mill outside office	73
17	09.12.20	Plate Mill near furnace	71
18	09.12.20	Plate Mill storage area	81
19	09.12.20	Bar Mill outside office	83
20	09.12.20	Bar Mill near furnace	79
21	09.12.20	Bar Mill storage area	81
22	10.12.20	SMS outside EAF control room	81
23	10.12.20	SMS outside LF control room	86
24	10.12.20	SMS outside water complex office	72
25	10.12.20	SMS near thickener	72
26	10.12.20	SMS near propane storage area	76
27	10.12.20	Near BOF converter	87
28	10.12.20	Outside BOF office	81
29	10.12.20	Outside Granshot control room	94
30	10.12.20	SSD outside office	73
31	10.12.20	SSD inside workshop	79
32	11.12.20	Coke Oven near coal blending bins	93
33	11.12.20	Coke Oven near coal crusher	92



Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
34	11.12.20	Coke Oven near coal mixer	91
35	11.12.20	Coke Oven near coal tower	82
36	11.12.20	Coke Oven near Battery 1	84
37	11.12.20	Coke Oven near Battery 2	87
38	11.12.20	Coke Oven near Battery 3	90
39	11.12.20	Coke Oven near Battery 4	92
40	12.12.20	Coke Oven near quenching tower 1	81
41	12.12.20	Coke Oven near quenching tower 2	89
42	12.12.20	Coke Oven near coke cutting & screening house	91
43	12.12.20	Coke Oven byproduct area	80
44	15.12.20	Blast Furnace near stock house	92
45	15.12.20	Blast Furnace taphole 1 & 2 side	83
46	15.12.20	Blast Furnace taphole 3 & 4 side	91
47	15.12.20	Sinter Plant coke building	91
48	15.12.20	Sinter Plant flux building	93
49	15.12.20	Sinter Plant crusher building	91
50	15.12.20	Sinter Plant screening building	90
51	15.12.20	Sinter Plant proportionate building	92
52	15.12.20	Sinter Plant outside control room	73
53	16.12.20	RMHS package 1 yard	91
54	16.12.20	Junction House 3	82
55	16.12.20	Junction House 5	84
56	16.12.20	Junction House 8	87
57	16.12.20	Junction House 10	91
58	16.12.20	Junction House 12	84
59	17.12.20	RMHS package 6 yard	90
60	17.12.20	Junction House 17	83
61	17.12.20	Junction House 20	87
62	17.12.20	RMHS package 8 yard	91

*apud*  
Lab (I/C)

*[Signature]*  
HOD (EMD)



Ref. No.: EMD/LAB/2020-21/135

Date: 19.11.2020

**FUGITIVE DUST MONITORING REPORT**

(November 2020)

Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
1	04.11.20	Power Plant ash silo	90
2	04.11.20	Process Boiler ash silo	83
3	04.11.20	HESS plant raw material area	81
4	04.11.20	HESS plant product storage area	87
5	04.11.20	LWA plant raw material area	88
6	04.11.20	LWA plant product storage area	82
7	05.11.20	CGP ash silo	76
8	05.11.20	Coal Washery outside office	84
9	05.11.20	Coal Washery near yard	87
10	05.11.20	Oxygen Plant outside office	80
11	09.11.20	DRI near furnace	84
12	09.11.20	DRI outside control room	76
13	09.11.20	LDP outside control room	85
14	09.11.20	LDP near kiln	87
15	09.11.20	LDP product handling area	83
16	10.11.20	Plate Mill outside office	77
17	10.11.20	Plate Mill near furnace	79
18	10.11.20	Plate Mill storage area	84
19	10.11.20	Bar Mill outside office	86
20	10.11.20	Bar Mill near furnace	81
21	10.11.20	Bar Mill storage area	84
22	11.11.20	SMS outside EAF control room	85
23	11.11.20	SMS outside LF control room	83
24	11.11.20	SMS outside water complex office	79
25	11.11.20	SMS near thickener	71
26	11.11.20	SMS near propane storage area	72
27	11.11.20	Near BOF converter	92
28	11.11.20	Outside BOF office	86
29	11.11.20	Outside Granshot control room	92
30	12.11.20	SSD outside office	82
31	12.11.20	SSD inside workshop	87
32	12.11.20	Coke Oven near coal blending bins	90
33	12.11.20	Coke Oven near coal crusher	95



Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
34	12.11.20	Coke Oven near coal mixer	80
35	12.11.20	Coke Oven near coal tower	81
36	13.11.20	Coke Oven near Battery 1	82
37	13.11.20	Coke Oven near Battery 2	89
38	13.11.20	Coke Oven near Battery 3	87
39	13.11.20	Coke Oven near Battery 4	89
40	13.11.20	Coke Oven near quenching tower 1	88
41	13.11.20	Coke Oven near quenching tower 2	86
42	13.11.20	Coke Oven near coke cutting & screening house	83
43	13.11.20	Coke Oven byproduct area	84
44	14.11.20	Blast Furnace near stock house	81
45	14.11.20	Blast Furnace taphole 1 & 2 side	86
46	14.11.20	Blast Furnace taphole 3 & 4 side	90
47	14.11.20	Sinter Plant coke building	89
48	14.11.20	Sinter Plant flux building	87
49	14.11.20	Sinter Plant crusher building	90
50	16.11.20	Sinter Plant screening building	92
51	16.11.20	Sinter Plant proportionate building	81
52	16.11.20	Sinter Plant outside control room	81
53	16.11.20	RMHS package 1 yard	95
54	16.11.20	Junction House 3	88
55	16.11.20	Junction House 5	87
56	17.11.20	Junction House 8	82
57	17.11.20	Junction House 10	90
58	17.11.20	Junction House 12	83
59	18.11.20	RMHS package 6 yard	91
60	18.11.20	Junction House 17	82
61	18.11.20	Junction House 20	84
62	18.11.20	RMHS package 8 yard	92

*apal*  
Lab (I/C)

*[Signature]*  
HOD (EMD)



Ref. No.: EMD/LAB/2020-21/117

Date: 16.10.2020

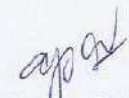
**FUGITIVE DUST MONITORING REPORT**

(October 2020)

Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
1	05.10.20	Power Plant ash silo	91
2	05.10.20	Process Boiler ash silo	87
3	05.10.20	HESS plant raw material area	73
4	05.10.20	HESS plant product storage area	80
5	05.10.20	LWA plant raw material area	83
6	05.10.20	LWA plant product storage area	81
7	06.10.20	CGP ash silo	71
8	06.10.20	Coal Washery outside office	81
9	06.10.20	Coal Washery near yard	83
10	06.10.20	Oxygen Plant outside office	81
11	07.10.20	DRI near furnace	89
12	07.10.20	DRI outside control room	73
13	07.10.20	LDP outside control room	84
14	07.10.20	LDP near kiln	92
15	07.10.20	LDP product handling area	86
16	08.10.20	Plate Mill outside office	79
17	08.10.20	Plate Mill near furnace	76
18	08.10.20	Plate Mill storage area	83
19	08.10.20	Bar Mill outside office	79
20	08.10.20	Bar Mill near furnace	86
21	08.10.20	Bar Mill storage area	91
22	09.10.20	SMS outside EAF control room	89
23	09.10.20	SMS outside LF control room	87
24	09.10.20	SMS outside water complex office	78
25	09.10.20	SMS near thickener	73
26	09.10.20	SMS near propane storage area	78
27	09.10.20	Near BOF converter	91
28	09.10.20	Outside BOF office	82
29	09.10.20	Outside Granshot control room	89
30	10.10.20	SSD outside office	79
31	10.10.20	SSD inside workshop	84
32	10.10.20	Coke Oven near coal blending bins	93
33	10.10.20	Coke Oven near coal crusher	93



Sl. No.	Date	Location	PM <sub>10</sub> (µg/m <sup>3</sup> )
34	10.10.20	Coke Oven near coal mixer	86
35	10.10.20	Coke Oven near coal tower	87
36	12.10.20	Coke Oven near Battery 1	88
37	12.10.20	Coke Oven near Battery 2	91
38	12.10.20	Coke Oven near Battery 3	84
39	12.10.20	Coke Oven near Battery 4	86
40	12.10.20	Coke Oven near quenching tower 1	93
41	12.10.20	Coke Oven near quenching tower 2	87
42	12.10.20	Coke Oven near coke cutting & screening house	87
43	12.10.20	Coke Oven byproduct area	83
44	13.10.20	Blast Furnace near stock house	86
45	13.10.20	Blast Furnace taphole 1 & 2 side	84
46	13.10.20	Blast Furnace taphole 3 & 4 side	93
47	13.10.20	Sinter Plant coke building	93
48	13.10.20	Sinter Plant flux building	90
49	13.10.20	Sinter Plant crusher building	91
50	13.10.20	Sinter Plant screening building	94
51	13.10.20	Sinter Plant proportionate building	86
52	13.10.20	Sinter Plant outside control room	84
53	14.10.20	RMHS package 1 yard	96
54	14.10.20	Junction House 3	86
55	14.10.20	Junction House 5	88
56	14.10.20	Junction House 8	89
57	14.10.20	Junction House 10	92
58	14.10.20	Junction House 12	86
59	15.10.20	RMHS package 6 yard	94
60	15.10.20	Junction House 17	87
61	15.10.20	Junction House 20	81
62	15.10.20	RMHS package 8 yard	95

  
Lab (I/C)

  
HOD (EMD)



# Annexure 4

NAME OF THE INDUSTRY:- JINDAL STEEL & POWER LIMITED, ANGUL

STATUS OF UTILISATION OF COAL ASH (BED ASH & FLY ASH) FOR 2020-21

## 1. Ash from 6 X 135 MW Captive Power Plant

Sl.No	Month & Year	Total coal consumption (Ton)	Power generated from CPP (MU)	Fly ash (Ton)	Bed Ash (Ton)	Total (Ton)	Disposal Method	Fly ash Bricks & Aggregate (Ton)	Supplies to industries			Land filling		Utilization in Embankment/dyke raising		Other purpose					Total Ash utilized (Ton)	% of utilization	
									Cement plant (Ton)	Asbestos plants (Ton)	Quarry filling (Ton)	Coal mine void filling (Ton)	Dyke raising (Ton)	Land development (Ton)	Road Making (Ton)	Small land fill / Civil foundation backfilling (Ton)	Cenosphere (Ton)	Tiles (Ton)	Aggregates (Ton)				
1	April'20	119747	191.679	46386	11596	57982		4511	0	0	0	0	53471	0	0	0	0	0	0	0	0	57982	100.00
2	May'20	121081	201.831	42088	10522	52610		2461	0	0	0	0	50149	0	0	0	0	0	0	0	0	52610	100.00
3	June'20	232474	304.765	81961	20490	102451		2038	0	0	0	0	100413	0	0	0	0	0	0	0	0	102451	100.00
4	July'20	199988	285.160	67916	16979	84895		1269	0	0	0	0	0	0	0	0	0	0	0	0	0	56174	66.17
5	Aug'20	163568	226.627	56267	14067	70334		3917	0	0	0	0	0	0	0	0	0	0	0	0	0	35451	50.40
6	Sept'20	231857	287.200	82040	20510	102550	HCS & Dry disposal	4615	0	0	0	0	0	0	0	0	0	0	0	0	0	35854	34.96
7	Oct'20	147330	214.760	52497	13124	65621		4426	0	0	0	0	0	0	0	0	0	0	0	0	0	39750	60.58
8	Nov'20	167201	259.600	59209	14577	73786		2319	0	0	0	0	0	0	0	0	0	0	0	0	0	34565	46.84
9	Dec'20	214528	311.295	72562	18140	90702		4217	0	0	0	0	0	0	0	0	0	0	0	0	0	30633	33.77
10	Jan'21	237615	320.720	82652	20663	103315		4911	0	0	0	0	0	0	0	0	0	0	0	0	0	33373	32.30
11	Feb'21	190811	262.187	67685	16921	84606		5422	0	0	0	0	0	0	0	0	0	0	0	0	0	24210	28.61
12	Mar'21	226001	288.845	78286	19572	97858		5873	0	0	0	0	0	0	0	0	0	0	0	0	0	28363	28.98
	Total	2252201	3154.669	789549	197161	986710		45979	0	0	0	0	204033	0	0	0	0	0	0	0	0	531416	53.86

## 2. Ash from 3 X 180 TPH Process Boiler

Sl.No	Month & Year	Total coal consumption (Ton)	Steam generated from Process Boiler (Ton)	Fly ash (Ton)	Bed Ash (Ton)	Total (Ton)	Disposal Method	Fly ash Bricks & Aggregate (Ton)	Supplies to industries			Land filling		Utilization in Embankment/dyke raising		Other purpose					Total Ash utilized (Ton)	% of utilization	
									Cement plant (Ton)	Asbestos plants (Ton)	Quarry filling (Ton)	Coal mine void filling (Ton)	Dyke raising (Ton)	Land development (Ton)	Road Making (Ton)	Small land fill / Civil foundation backfilling (Ton)	Cenosphere (Ton)	Tiles (Ton)	Aggregates (Ton)				
1	April'20	21895	56089	8469	2117	10586		0	0	0	0	0	10586	0	0	0	0	0	0	0	0	10586	100.00
2	May'20	30726	97197	10734	2684	13418		0	0	0	0	0	13418	0	0	0	0	0	0	0	0	13418	100.00
3	June'20	62796	205313	22807	5702	28509		0	0	0	0	0	28509	0	0	0	0	0	0	0	0	28509	100.00
4	July'20	56574	192318	19511	4878	24389		0	0	0	0	0	0	0	0	0	0	0	0	0	0	12364	50.69
5	Aug'20	71840	235189	25380	6345	31725		0	0	0	0	0	0	0	0	0	0	0	0	0	0	11257	35.48
6	Sept'20	73324	226776	26790	6697	33487	HCS & Dry disposal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10568	31.56
7	Oct'20	36575	111943	13641	3410	17051		0	0	0	0	0	0	0	0	0	0	0	0	0	0	7456	43.73
8	Nov'20	39165	129920	13651	3413	17064		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6872	40.27
9	Dec'20	71963	254544	24341	6085	30426		0	0	0	0	0	0	0	0	0	0	0	0	0	0	7332	23.77
10	Jan'21	72876	245439	25320	6330	31650		0	0	0	0	0	0	0	0	0	0	0	0	0	0	7389	23.35
11	Feb'21	63415	216853	21246	5312	26558		0	0	0	0	0	0	0	0	0	0	0	0	0	0	5124	19.29
12	Mar'21	65471	230379	21790	5447	27337		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4962	18.22
	Total	666620	2201960	233680	56420	292100		0	0	0	0	0	52513	0	0	0	0	0	0	0	0	125737	43.05

Signature: 

Name: Alok Sahu

Designation: HOD - EMD

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**M/s. Jindal Steel and Power Limited,  
SH-63, Chendipada Road,  
Jindal Nagar, Angul-759111,  
Odisha- India.**

Report Number : VLL/VLS/20/06494/025  
Issue Date : 2020.11.06  
Your Ref : 4561531023  
And Date : 20.09.2019

Page 2 of 2

**Sample Name : ASH POND MONITORING BORE WELL WATER**

Sample Collection Date	: 19.10.2020	Sample Registration Date	: 23.10.2020
Sample Received Date	: 23.10.2020	Analysis Completion Date	: 05.10.2020
Sample Analysis date	: 23.10.2020		
Method of Testing	: Method of Testing: As per APHA 23 <sup>rd</sup> Edition , IS 3025 Part-44, Instrument Used: ICP-OES (Perkin-Elmer) & ICP-MS (Agilent) Analysis as per IS 10500: 2012 Drinking Water specification		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Limit IS 10500 : 2012
20	Mineral oil	mg/l	Absent	0.5(NR)
21	Cadmium as Cd	mg/l	<0.003	0.003(NR)
22	Total Arsenic as As	mg/l	<0.01	0.01(0.05)
23	Copper as Cu	mg/l	0.02	0.05(1.5)
24	Lead as Pb	mg/l	<0.01	0.01(NR)
25	Manganese as Mn	mg/l	0.03	0.1(0.3)
26	Molybdenum as Mo	mg/l	<0.001	0.07(NR)
27	Nickel as Ni	mg/l	<0.005	0.02(NR)
28	Iron as Fe	mg/l	0.17	0.3(NR)
29	Total Chromium as Cr	mg/l	<0.005	0.05(NR)
30	Selenium as Se	mg/l	<0.01	0.05(NR)
31	Zinc as Zn	mg/l	0.31	5.0(15)
32	Aluminium as Al	mg/l	<0.01	0.03(0.2)
33	Mercury as Hg	mg/l	<0.001	0.001(NR)
34	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05(NR)
35	Chloramines as Cl <sub>2</sub>	mg/l	<0.05	4.0(NR)
36	Ammonia (as total ammonia-N)	mg/l	<0.05	0.5(NR)
37	Barium as Ba	mg/l	0.065	0.7(NR)
38	Silver as Ag	mg/l	<0.01	0.1(NR)
39	E.Coil	Per 100 ml	Absent	Absent
40	Total Coli forms (MPN/100ml)	Per 100 ml	Absent	Absent

**Dr. SubbaReddy Mallampati**

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**ISSUED TO**

**M/s. Jindal Steel and Power Limited,  
SH-63, Chendipada Road,  
Jindal Nagar, Angul-759111,  
Odisha- India.**

Report Number : VLL/VLS/20/06494/025  
Issue Date : 2020.11.06  
Your Ref : 4561531023  
And Date : 20.09.2019

Page 1 of 2

**Sample Name : ASH POND MONITORING BORE WELL WATER**

Sample Collection Date	: 19.10.2020	Sample Registration Date	: 23.10.2020
Sample Received Date	: 23.10.2020	Analysis Completion Date	: 05.10.2020
Sample Analysis date	: 23.10.2020		
Method of Testing	: Method of Testing: As per APHA 23 <sup>rd</sup> Edition , IS 3025 Part-44, Instrument Used: ICP-OES (Perkin-Elmer) & ICP-MS (Agilent) Analysis as per IS 10500: 2012 Drinking Water specification		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Limit IS 10500 : 2012
1	pH value	-	7.56	6.5-8.5 (NR)
2	Colour	Hazen	3	5(15)
3	Taste	-	Agreeable	Agreeable
4	Odour	-	Agreeable	Agreeable
5	Turbidity	NTU	5	1(5)
6	Total dissolved solids at 180°C	mg/l	415	500(2000)
7	Total Hardness as CaCO <sub>3</sub>	mg/l	201.9	200(600)
8	Total Alkalinity as CaCO <sub>3</sub>	mg/l	194	200(600)
9	Calcium as Ca	mg/l	41.6	75(200)
10	Magnesium as Mg	mg/l	23.8	30(100)
11	Free Residual chlorine	mg/l	<0.2	0.2(1.0)
12	Boron	mg/l	0.29	0.5(1.0)
13	Chlorides as Cl	mg/l	62.7	250(1000)
14	Sulphates as SO <sub>4</sub>	mg/l	33.2	200(400)
15	Fluorides as F	mg/l	0.7	1.0(1.5)
16	Nitrates as NO <sub>3</sub>	mg/l	2.8	45(NR)
17	Phenolic Compounds as C <sub>6</sub> H <sub>5</sub> OH	mg/l	<0.001	0.001(0.002)
18	Cyanides as CN	mg/l	<0.02	0.05(NR)
19	Anionic detergents as MBAS	mg/l	<0.02	0.2(1.0)

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Odisha- India.**

Report Number : VLL/VLS/20/12172/019  
Issue Date : 2021.02.26  
Your Ref : 4561531023  
And Date : 20.09.2019

Page 1 of 2

**Sample Name : ASH POND MONITORING BORE WELL WATER**

Sample Collection Date	: 10.02.2021	Sample Registration Date	: 12.02.2021
Sample Received Date	: 12.02.2021	Analysis Completion Date	: 24.02.2021
Sample Analysis date	: 13.02.2021		
Method of Testing	: Method of Testing: As per APHA 23 <sup>rd</sup> Edition , IS 3025 Part-44, Instrument Used: ICP-OES (Perkin-Elmer) & ICP-MS (Agilent) Analysis as per IS 10500: 2012 Drinking Water specification		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Limit IS 10500 : 2012
1	pH value	-	7.84	6.5-8.5 (NR)
2	Colour	Hazen	2	5(15)
3	Taste	-	Agreeable	Agreeable
4	Odour	-	Agreeable	Agreeable
5	Turbidity	NTU	4	1(5)
6	Total dissolved solids at 180 <sup>o</sup> C	mg/l	398	500(2000)
7	Total Hardness as CaCO <sub>3</sub>	mg/l	184.6	200(600)
8	Total Alkalinity as CaCO <sub>3</sub>	mg/l	172	200(600)
9	Calcium as Ca	mg/l	36.4	75(200)
10	Magnesium as Mg	mg/l	21.5	30(100)
11	Free Residual chlorine	mg/l	<0.2	0.2(1.0)
12	Boron	mg/l	0.34	0.5(1.0)
13	Chlorides as Cl	mg/l	58.4	250(1000)
14	Sulphates as SO <sub>4</sub>	mg/l	37.2	200(400)
15	Fluorides as F	mg/l	0.49	1.0(1.5)
16	Nitrates as NO <sub>3</sub>	mg/l	3.6	45(NR)
17	Phenolic Compounds as C <sub>6</sub> H <sub>5</sub> OH	mg/l	<0.001	0.001(0.002)
18	Cyanides as CN	mg/l	<0.02	0.05(NR)
19	Anionic detergents as MBAS	mg/l	<0.02	0.2(1.0)

**Dr. SubbaReddy Mallampati**

**Group Leader, Environment**

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Odisha- India.**

Report Number : VLL/VLS/20/12172/019  
Issue Date : 2021.02.26  
Your Ref : 4561531023  
And Date : 20.09.2019

Page 2 of 2

**Sample Name : ASH POND MONITORING BORE WELL WATER**

Sample Collection Date	: 10.02.2021	Sample Registration Date	: 12.02.2021
Sample Received Date	: 12.02.2021	Analysis Completion Date	: 24.02.2021
Sample Analysis date	: 13.02.2021		
Method of Testing	: Method of Testing: As per APHA 23 <sup>rd</sup> Edition , IS 3025 Part-44, Instrument Used: ICP-OES (Perkin-Elmer) & ICP-MS (Agilent) Analysis as per IS 10500: 2012 Drinking Water specification		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Limit IS 10500 : 2012
20	Mineral oil	mg/l	Absent	0.5(NR)
21	Cadmium as Cd	mg/l	<0.003	0.003(NR)
22	Total Arsenic as As	mg/l	<0.01	0.01(0.05)
23	Copper as Cu	mg/l	0.03	0.05(1.5)
24	Lead as Pb	mg/l	<0.01	0.01(NR)
25	Manganese as Mn	mg/l	0.04	0.1(0.3)
26	Molybdenum as Mo	mg/l	<0.001	0.07(NR)
27	Nickel as Ni	mg/l	<0.005	0.02(NR)
28	Iron as Fe	mg/l	0.21	0.3(NR)
29	Total Chromium as Cr	mg/l	<0.005	0.05(NR)
30	Selenium as Se	mg/l	<0.01	0.05(NR)
31	Zinc as Zn	mg/l	0.47	5.0(15)
32	Aluminium as Al	mg/l	0.02	0.03(0.2)
33	Mercury as Hg	mg/l	<0.001	0.001(NR)
34	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05(NR)
35	Chloramines as Cl <sub>2</sub>	mg/l	<0.05	4.0(NR)
36	Ammonia (as total ammonia-N)	mg/l	<0.05	0.5(NR)
37	Barium as Ba	mg/l	0.078	0.7(NR)
38	Silver as Ag	mg/l	<0.01	0.1(NR)
39	E.Coil	Per 100 ml	Absent	Absent
40	Total Coli forms (MPN/100ml)	Per 100 ml	Absent	Absent

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**IMPLEMENTATION OF CHARTER ON CORPORATE RESPONSIBILITY IN  
INTEGRATED STEEL PLANT**

<b>Unit</b>	<b>Recommendation</b>	<b>Compliance</b>
1. Coke Oven Plants	<p>a) To meet the parameters PLD (% leaking colors), PLL (% leaking lids), PLO (% leaking off take), of the notified standards under EPA within three years by December 2005). Industry will submit time bound action plan and PER Chart along with the Bank Guarantee for the implementation or the time.</p> <p>b) To rebuild at least 40% of the coke oven batteries in next 10 years (by December 2012.).</p>	<p>The coke oven has been designed and commissioned to meet the parameters PLD, PLL, PLO.</p> <p>Not applicable.</p>
2. Steel Melting Shop	Fugitive emissions - To reduce 30% by March 2004 and 100% by March 2008 (including installation of secondary dusting facilities).	The fugitive emission in the steel melting shop has been controlled by installing dust extraction system and bag filters.
3. Blast Furnace	Direct inject of reducing agents by June 2013.	Direct injection of reducing agents such as coal is being adopted to reduce dependency on coke.
4. Solid Waste /Hazardous Waste Management	Utilization of Steel/ Melting shop (SMS)/ Blast Furnace (BF) Slag as per the following schedule: * By 2004 - 70% * By 2006 – 80% and * By 2007 – 100 %.	Blast furnace slag is being used for cement making and SMS slag is being used for road making / land filling etc.
	<p>a) Charge of tar sludge/ ETP sludge to Coke Oven by June 2003.</p> <p>b) Inventorization of the Hazardous waste as per Hazardous Waste (M&amp; H), Rules, 1989 as amended in 2000 and implementation of the Rules by Dec. 2003. (tar sludge, acid sludge, waste Lubricating oil and type fuel falls in the category of Hazardous waste).</p>	<p>ETP sludge is being disposed to common hazardous waste disposal site developed by M/s Ramky at Jajpur. Tar sludge will be charged in the Coke oven.</p> <p>Inventorization of the Hazardous waste has been done as per Hazardous Waste Rule 2016.</p>
5. Water Conservation/ Water Pollution	a) To reduce specific water consumption to 5 m <sup>3</sup> /t for long products and 8 m <sup>3</sup> /t for flat products by December 2005.	The specific water consumption for both long products & flat products is being maintained at <5 m <sup>3</sup> /t.

	b) To operate the Co-BP effluent treatment plant efficiently to achieve the notified effluent discharge standards. – by June, 2003.	Coke oven byproduct plant effluent is being treated to meet the standard and treated waste water is being reused
6.	Installation of Continuous stacks monitoring system & its calibration in major stacks and setting up of the online ambient air quality monitoring stations by June 2005.	Continuous stack monitoring system has been installed in all major stacks and 4 no. of online ambient air monitoring station has been set up.
7.	To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard will be submitted to CPCB/SPCB every three months.	Log book is being maintained for every pollution control equipment to record run time, failure time and efficiency.
8.	To implement the recommendations of Life Cycle Assessment (LCA) study sponsored by MoEF by December 2003.	JSPL will implement any such recommendation by MoEF based on LCA study.
9.	<p>The industry will initiate the steps to adopt the following clean technologies measures to improve the performance of industry towards production, energy, land environment.</p> <ul style="list-style-type: none"> <li>- Energy recovery of top Blast Furnace (BF) gas.</li> <li>- Use of Tar- free runner linings.</li> <li>- De-dusting of Cast house at tap holes, runners, skimmers ladle and charging points.</li> <li>- Suppression of fugitive emissions using nitrogen gas or other inert gas.</li> <li>- To study the possibility of slag and fly ash transportation back to the abandoned mines, to the abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation.</li> <li>- Processing of the waste containing flux &amp; ferrous wastes through waste recycling plant.</li> </ul>	<p>All these conditions has been complied by adopting:</p> <ul style="list-style-type: none"> <li>- Energy recovery of top Blast Furnace (BF) gas.</li> <li>- Use of Tar- free runner linings.</li> <li>- De-dusting of Cast house.</li> <li>- Dust extraction system has been provided to suppress fugitive emission</li> <li>- No abandoned mines available for backfilling</li> <li>- Waste containing flux &amp; ferrous is being recycled through Sinter Plant.</li> </ul>

	<ul style="list-style-type: none"> <li>- To implement rainwater harvesting</li> <li>- Reduction Green House Gases by: <ul style="list-style-type: none"> <li>* Reduction in power consumption</li> <li>* Use of by –products gases for power generation</li> <li>* Promotion of Energy Optimization technology including energy/ audit.</li> </ul> </li> <li>- To set targets for Resource Conservation such as Raw material, energy and water consumption to match International Standards.</li> <li>- Up- gradation in the monitoring and analysis facilities for air and water pollution. Also to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories.</li> <li>- To Improve overall house keeping.</li> </ul>	<ul style="list-style-type: none"> <li>- 9 no. of rainwater harvesting structures have been made.</li> <li>- Reduction Green House Gases by: <ul style="list-style-type: none"> <li>* Reduction in power consumption</li> <li>* Use of by –products gases for power generation</li> <li>* Promotion of Energy Optimization technology including energy/ audit.</li> </ul> </li> <li>- JSPL has designed the plant for optimum utilization of resources and will further work towards Resource Conservation such as Raw material, energy and water consumption to match International Standards.</li> <li>- Environmental monitoring laboratory has been set up.</li> <li>- We have already adopted good housekeeping practices by implementing 5S in work place. For road cleaning we have engaged mechanical road cleaning machine.</li> </ul>
10.Sponge iron plant	<p>Inventorisation of sponge iron plants to be completed by SPCBs/CPCE by June 2003 and units will be asked to install proper air pollution control equipment by December 2003 to control primary and secondary emissions.</p> <p>As per rebuilding schedule submitted to CPCB/MoEF.</p>	Not applicable.



**IMPLEMENTATION OF CHARTER ON CORPORATE RESPONSIBILITY IN  
THERMAL POWER PLANT**

Sl. No.	Recommendation	Compliance
1	Implementation of Environmental Standards (emission & effluent) in non-compliant* Power Plants (31 & 27) - Submission of action plan : June 30, 2003 - Placement of order for Pollution of control equipment : September, 2003 - Installation & commission : December 31, 2005.	Not applicable
2	For existing thermal power plants, a feasibility study will be carried out by Central Electricity Authority (CEA) to examine possibility to reduce the particulate matter emissions to 100 mg/Nm <sup>3</sup> . The studies shall also suggest the road map to meet 100 mg/Nm <sup>3</sup> . The studies shall also suggest the road map to meet 100 mg/Nm <sup>3</sup> wherever found feasible. CEA shall submit the report by March 2004.	CFBC boiler is using in power plant to use middling and reject coals from coal washery. ESP is design to achieve particulate matter emission below 50 mg/Nm <sup>3</sup> .
3	New / expansion power projects to be accorded environmental clearance on or after 14.1.2003 shall meet the limit of 100 mg/Nm <sup>3</sup> for particulate matter.	Emission level of 50 mg/Nm <sup>3</sup> has been achieved.
4	Development of SO <sub>2</sub> & NO <sub>x</sub> emission standards for coal based plants by December 2003. - New/ expansion power projects shall meet the limit of SO <sub>2</sub> & NO <sub>x</sub> w.e.f. 1.1.2005. - Existing power plants shall meet the limit of SO <sub>2</sub> & NO <sub>x</sub> w.e.f. 1.1.2006.	JSPL has installed lime dosing system to reduce SO <sub>2</sub> emission below 600 m <sup>3</sup> /Nm <sup>3</sup> . Low NO <sub>x</sub> burner has been provided to reduce NO <sub>x</sub> below 300 mg/Nm <sup>3</sup> .
5	Install/activate opacity meters/ continuous monitoring system in all the units by December 31, 2004 with proper calibration system.	Continuous monitoring system has been installed in the stacks of the power plant.
6	Development of guidelines/ standards for mercury and other toxic heavy metals emissions by December 2003.	JSPL meet the new mercury emission standards
7	Review of stack height requirement and guidelines for power plants based on micro meteorological data by June 2003.	Not applicable
8	Implementation of use of beneficiated coal as per GOI Notification: Power plants will sign fuel supply agreement (FSA) to meet the requirement as per the matrix prepared by CEA for compliance of the notification as short term measure. Options/mechanism for setting up of coal washeries as a long term measure * Coal India will up its own washery * State Electricity Board to set up its own washery	Not applicable

	<p>* Coal India to ask private entrepreneurs to set up washeries for CIL and taking washing charges</p> <p>* SEBs to select a private entrepreneur to set up a washery near pit- head installation of coal beneficiation plant</p>	
9	Power plants will indicate their requirement of abandoned coal mines for ash disposal & Coal India/ MOC shall provide the list of abandoned mines by June 2003 to CEA.	JSPL has been intimated the Coal India Limited for its requirement for abandoned mines.
10	Power plants will provide dry ash to the users outside the premises or uninterrupted access to the users within six months.	JSPL provides dry ash to the users outside the premises or uninterrupted access to the users.
11	Power Plants should provide dry fly ash free of cost to the users.	JSPL provide dry fly ash free of cost to the users.
12	State P.W.Ds/ construction & development agencies shall also adhere to the specifications/Schedules of CPWD for ash based products utilization MoEF will take up the matter with State Governments.	Not applicable
13 (i)	New plants to be accorded environmental clearance on or after 01.04.2003 shall adopt dry fly ash extraction or dry disposal system or Medium (35-40%) ash concentration slurry disposal system or Lean phase with hundred percent ash water re-circulation system depending upon site specific environmental situation.	HCSO system has been adopted for ash disposal.
(ii)	Existing plants shall adopt any of the systems mentioned in 13 (i) by December 2004.	Not applicable
14	Fly ash Mission shall prepare guidelines/manuals for fly ash utilization by March 2004.	Not applicable
15	New plants shall promote adoption of clean coal and clean power generation technologies.	CFBC technology has been adopted.

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Annexure 7

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Report Number : VLL/VLS/20/06494/022  
 Issue Date : 2020.11.06  
 P.O. Ref : 4561531023  
 P.O. Date : 20.09.2019

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Sample Name : POWER PLANT ETP OUTLET WATER

Sample Collection Date	: 19.10.2020	Sample Registration Date	: 23.10.2020
Sample Received Date	: 23.10.2020	Analysis Completion Date	: 05.10.2020
Sample Analysis date	: 28.02.2020		
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Standard
1	pH	mg/L	6.74	5.5 - 9.0
2	Total Suspended Solids	mg/L	29	100
3	Total Dissolved Solids	mg/L	145	2100
4	Iron as Fe	mg/L	0.02	3.00
5	Chemical Oxygen Demand	mg/L	20	250
6	Biological Oxygen Demand	mg/L	3.4	30
7	Oil and Grease	mg/L	<1.0	10
8	Ammonia as NH <sub>3</sub>	mg/L	<0.1	50
9	Total Chromium as Cr	mg/L	<0.01	2.0



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Report Number : VLL/VLS/20/08088/\*\*  
Issue Date : 2020.12.08  
P.O. Ref : 4561531023  
P.O. Date : 20.09.2019

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Sample Name : POWER PLANT ETP OUTLET WATER

Sample Collection Date	: 28.11.2020	Sample Registration Date	: 30.11.2020
Sample Received Date	: 30.12.2020	Analysis Completion Date	: 07.12.2020
Sample Analysis date	: 30.12.2020		
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Standard
1	pH	mg/L	7.01	5.5 - 9.0
2	Total Suspended Solids	mg/L	18	100
3	Total Dissolved Solids	mg/L	101	2100
4	Iron as Fe	mg/L	0.06	3.00
5	Chemical Oxygen Demand	mg/L	16	250
6	Biological Oxygen Demand	mg/L	<3.0	30
7	Oil and Grease	mg/L	<1.0	10
8	Ammonia as NH <sub>3</sub>	mg/L	<0.1	50
9	Total Chromium as Cr	mg/L	<0.01	2.0

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Report Number : VLL/VLS/20/10060/028  
Issue Date : 2021.01.04  
P.O. Ref : 4561531023  
P.O. Date : 20.09.2019

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Sample Name	: POWER PLANT ETP OUTLET WATER			
Sample Collection Date	: 25.12.2020	Sample Registration Date	: 28.12.2020	
Sample Received Date	: 28.12.2020	Analysis Completion Date	: 04.01.2021	
Sample Analysis date	: 28.12.2020			
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44			

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Standard
1	pH	mg/L	6.97	5.5 - 9.0
2	Total Suspended Solids	mg/L	16	100
3	Total Dissolved Solids	mg/L	97	2100
4	Iron as Fe	mg/L	0.05	3.00
5	Chemical Oxygen Demand	mg/L	14	250
6	Biological Oxygen Demand	mg/L	<3.0	30
7	Oil and Grease	mg/L	<1.0	10
8	Ammonia as NH <sub>3</sub>	mg/L	<0.1	50
9	Total Chromium as Cr	mg/L	<0.01	2.0

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**Report Number** : VLL/VLS/20/12172/023  
**Issue Date** : 2021.02.26  
**P.O. Ref** : 4561531023  
**P.O. Date** : 20.09.2019

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**Sample Name** : **POWER PLANT ETP OUTLET WATER**

Sample Collection Date	: 10.02.2021	Sample Registration Date	: 12.02.2021
Sample Received Date	: 12.02.2021	Analysis Completion Date	: 24.02.2021
Sample Analysis date	: 13.02.2021		
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Standard
1	pH	mg/L	6.89	5.5 - 9.0
2	Total Suspended Solids	mg/L	27	100
3	Total Dissolved Solids	mg/L	116	2100
4	Iron as Fe	mg/L	0.13	3.00
5	Chemical Oxygen Demand	mg/L	20	250
6	Biological Oxygen Demand	mg/L	4.2	30
7	Oil and Grease	mg/L	<1.0	10
8	Ammonia as NH <sub>3</sub>	mg/L	<0.1	50
9	Total Chromium as Cr	mg/L	<0.01	2.0

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Report Number : VLL/VLS/21/00057/031  
Issue Date : 2021.04.10  
P.O. Ref : 4561531023  
P.O. Date : 20.09.2019

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Sample Name	: POWER PLANT ETP OUTLET WATER		
Sample Collection Date	: 24.03.2021	Sample Registration Date	: 26.03.2021
Sample Received Date	: 26.03.2021	Analysis Completion Date	: 09.04.2021
Sample Analysis date	: 27.03.2021		
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Standard
1	pH	mg/L	7.21	5.5 - 9.0
2	Total Suspended Solids	mg/L	19	100
3	Total Dissolved Solids	mg/L	246	2100
4	Iron as Fe	mg/L	0.35	3.00
5	Chemical Oxygen Demand	mg/L	25	250
6	Biological Oxygen Demand	mg/L	4.8	30
7	Oil and Grease	mg/L	<1.0	10
8	Ammonia as NH <sub>3</sub>	mg/L	<0.1	50
9	Total Chromium as Cr	mg/L	<0.01	2.0



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Report Number : VLL/VLS/20/06494/021  
Issue Date : 2020.11.06  
P.O. Ref : 4561531023  
P.O. Date : 20.09.2019

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Sample Name : CGP BIO ETP OUTLET WATER

Sample Collection Date	: 19.10.2020	Sample Registration Date	: 23.10.2020
Sample Received Date	: 23.10.2020	Analysis Completion Date	: 05.10.2020
Sample Analysis date	: 23.10.2020		
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Schedule-VI of BP Act (Discharge to Inland Surface Water)
1	pH	mg/L	6.82	5.5-9.0
2	Temperature	°C	22.3	Shall not exceed 5°C above the receiving water temperature
3	Colour	Hazen	8	5
4	Odour	Agreeable	Disagreeable	U/O
5	Suspended Solids	mg/L	26	100
6	Particle size of suspended solids	um	112	Shall pass 850 micron IS Sieve
7	Oil and Grease	mg/L	<0.1	10
8	Total Residual Chlorine	mg/L	<0.2	1.0
9	Ammonical Nitrogen as N	mg/L	5.4	50
10	Total kjeldhal Nitrogen	mg/L	8.3	100
11	Free Ammonia as NH <sub>3</sub>	mg/L	<0.1	5.0
12	Biological Oxygen Demand 3 days at 27°C	mg/L	18	30
13	Chemical Oxygen Demand	mg/L	90	250
14	Dissolved Oxygen	mg/L	4.1	-
15	Arsenic as As	mg/L	<0.01	0.2
16	Mercury as Hg	mg/L	<0.001	0.01
17	Lead as Pb	mg/L	<0.01	0.01
18	Cadmium as Cd	mg/L	<0.01	2.00
19	Hexavalent Chromium as Cr+6	mg/L	<0.05	0.01
20	Total Chromium as Cr	mg/L	0.04	2.00
21	Copper as Cu	mg/L	0.02	3.00
22	Zinc as Zn	mg/L	0.36	5
23	Selenium as Se	mg/L	<0.01	0.05
24	Nickel as Ni	mg/L	0.01	3.00
25	Cyanide as CN	mg/L	<0.02	0.02
26	Fluoride as F	mg/L	1.0	2.00
27	Dissolve phosphate as P	mg/L	3.4	5.00
28	Sulphide as S	mg/L	<0.5	2.00
29	Phenolic Compounds	mg/L	<0.001	1.00
30	Manganese as Mn	mg/L	0.02	2.00
31	Iron as Fe	mg/L	0.97	3.00
32	Vanadium as V	mg/L	0.03	0.02
33	Nitrate Nitrogen as N	mg/L	<0.1	10



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 P.O. Date : 20.09.2019

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Sample Name	: CGP BIO ETP OUTLET WATER		
Sample Collection Date	: 19.10.2020	Sample Registration Date	: 23.10.2020
Sample Received Date	: 23.10.2020	Analysis Completion Date	: 05.10.2020
Sample Analysis date	: 28.02.2020		
Method of Testing	: IS: 6582-1971(Reapproved 1992)		

**TEST REPORT**

% Conc [v/v]	No of Fish	Mortality Record				Symptoms of Toxicity
		Time in hours				
		24	48	72	96	
Test (100 %)	10	0	0	0	0	No symptoms of Toxicity were observed

Fish species: *Puntius sophore* (Fresh water minor caro) size: 2.5 to 3.0 cm Quality of sample pH: 6.8 and DO: 4.1 mg/L  
 Remarks: Survival of fish at 100% concentration of treated effluent after 96 hours of exposure is 100%



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**Report Number** : VLL/VLS/20/08088/\*\*\*  
**Issue Date** : 2020.12.08  
**P.O. Ref** : 4561531023  
**P.O. Date** : 20.09.2019

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**Sample Name** : CGP BIO ETP OUTLET WATER

Sample Collection Date	: 28.11.2020	Sample Registration Date	: 30.11.2020
Sample Received Date	: 30.12.2020	Analysis Completion Date	: 07.12.2020
Sample Analysis date	: 30.12.2020		
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Schedule-VI of EP Act (Discharge to Inland Surface Water)
1	pH	mg/L	6.7	5.5-9.0
2	Temperature	°C	22.8	Shall not exceed 5°C above the receiving water temperature
3	Colour	Hazen	10	5
4	Odour	Agreeable	Disagreeable	U/O
5	Suspended Solids	mg/L	28	100
6	Particle size of suspended solids	um	92	Shall pass 850 micron IS Sieve
7	Oil and Grease	mg/L	<0.1	10
8	Total Residual Chlorine	mg/L	<0.2	1.0
9	Ammonical Nitrogen as N	mg/L	7.3	50
10	Total kjeldhal Nitrogen	mg/L	9.1	100
11	Free Ammonia as NH <sub>3</sub>	mg/L	<0.1	5.0
12	Biological Oxygen Demand 3 days at 27°C	mg/L	14	30
13	Chemical Oxygen Demand	mg/L	75	250
14	Dissolved Oxygen	mg/L	3.1	-
15	Arsenic as As	mg/L	<0.01	0.2
16	Mercury as Hg	mg/L	<0.001	0.01
17	Lead as Pb	mg/L	<0.01	0.01
18	Cadmium as Cd	mg/L	<0.01	2.00
19	Hexavalent Chromium as Cr+6	mg/L	<0.05	0.01
20	Total Chromium as Cr	mg/L	0.02	2.00
21	Copper as Cu	mg/L	0.01	3.00
22	Zinc as Zn	mg/L	0.38	5
23	Selenium as Se	mg/L	<0.01	0.05
24	Nickel as Ni	mg/L	0.02	3.00
25	Cyanide as CN	mg/L	<0.02	0.02
26	Fluoride as F	mg/L	0.7	2.00
27	Dissolve phosphate as P	mg/L	2.3	5.00
28	Sulphide as S	mg/L	<0.5	2.00
29	Phenolic Compounds	mg/L	<0.001	1.00
30	Manganese as Mn	mg/L	0.03	2.00
31	Iron as Fe	mg/L	0.93	3.00
32	Vanadium as V	mg/L	0.04	0.02
33	Nitrate Nitrogen as N	mg/L	<0.1	10

**Dr. SubbaReddy Mallampati**  
**Group Leader-Environment**

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CIN : L24110TG1990PLC011977



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M/s. Jindal Steel and Power Limited,  
 SH-63, Chendipada Road,  
 Jindal Nagar, Angul-759111,  
 Odisha- India.

Report Number : VLL/VLS/20/08088/\*\*\*  
 Issue Date : 2020.12.08  
 P.O. Ref : 4561531023  
 P.O. Date : 20.09.2019

Page 2 of 2

Sample Name	: CGP BIO ETP OUTLET WATER		
Sample Collection Date	: 28.11.2020	Sample Registration Date	: 30.11.2020
Sample Received Date	: 30.12.2020	Analysis Completion Date	: 07.12.2020
Sample Analysis date	: 30.12.2020		
Method of Testing	: IS: 6582-1971(Reapproved 1992)		

**TEST REPORT**

% Conc [v/v]	No of Fish	Mortality Record				Symptoms of Toxicity
		Time in hours				
		24	48	72	96	
Test (100 %)	10	0	0	0	0	No symptoms of Toxicity were observed

Fish species: *Puntius sophore* (Fresh water minor caro) size: 2.5 to 3.0 cm Quality of sample pH: 6.8 and DO: 4.1 mg/L  
 Remarks: Survival of fish at 100% concentration of treated effluent after 96 hours of exposure is 100%

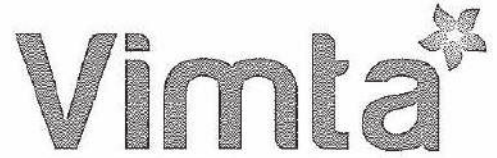
**Dr. SubbaReddy Mallampati**  
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Odisha- India.**

**Report Number : VLL/VLS/20/10060/027  
Issue Date : 2021.01.04  
P.O. Ref : 4561531023  
P.O. Date : 20.09.2019**

Page 1 of 2

**Sample Name : CGP BIO ETP OUTLET WATER**

Sample Collection Date	: 25.12.2020	Sample Registration Date	: 28.12.2020
Sample Received Date	: 28.12.2020	Analysis Completion Date	: 04.01.2021
Sample Analysis date	: 28.12.2020		
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Schedule-VI of EP Act (Discharge to Inland Surface Water)
1	pH	mg/L	6.5	5.5-9.0
2	Temperature	°C	20.7	Shall not exceed 5°C above the receiving water temperature
3	Colour	Hazen	9	5
4	Odour	Agreeable	Disagreeable	U/O
5	Suspended Solids	mg/L	26	100
6	Particle size of suspended solids	um	87	Shall pass 850 micron IS Sieve
7	Oil and Grease	mg/L	<0.1	10
8	Total Residual Chlorine	mg/L	<0.2	1.0
9	Ammonical Nitrogen as N	mg/L	6.9	50
10	Total kjeldhal Nitrogen	mg/L	8.7	100
11	Free Ammonia as NH <sub>3</sub>	mg/L	<0.1	5.0
12	Biological Oxygen Demand 3 days at 27°C	mg/L	12	30
13	Chemical Oxygen Demand	mg/L	11.9	250
14	Dissolved Oxygen	mg/L	2.8	-
15	Arsenic as As	mg/L	<0.01	0.2
16	Mercury as Hg	mg/L	<0.001	0.01
17	Lead as Pb	mg/L	<0.01	0.01
18	Cadmium as Cd	mg/L	<0.01	2.00
19	Hexavalent Chromium as Cr+6	mg/L	<0.05	0.01
20	Total Chromium as Cr	mg/L	0.01	2.00
21	Copper as Cu	mg/L	0.02	3.00
22	Zinc as Zn	mg/L	0.35	5
23	Selenium as Se	mg/L	<0.01	0.05
24	Nickel as Ni	mg/L	0.01	3.00
25	Cyanide as CN	mg/L	<0.02	0.02
26	Fluoride as F	mg/L	0.6	2.00
27	Dissolve phosphate as P	mg/L	2.1	5.00
28	Sulphide as S	mg/L	<0.5	2.00
29	Phenolic Compounds	mg/L	<0.001	1.00
30	Manganese as Mn	mg/L	0.02	2.00
31	Iron as Fe	mg/L	0.89	3.00
32	Vanadium as V	mg/L	0.03	0.02
33	Nitrate Nitrogen as N	mg/L	<0.1	10

**Dr. SubbaReddy Mallampati  
Group Leader-Environment**



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**Odisha- India.**

**Report Number** : VLL/VLS/20/10060/027  
**Issue Date** : 2021.01.04  
**P.O. Ref** : 4561531023  
**P.O. Date** : 20.09.2019

Page 2 of 2

**Sample Name** : CGP BIO ETP OUTLET WATER

Sample Collection Date	: 25.12.2020	Sample Registration Date	: 28.12.2020
Sample Received Date	: 28.12.2020	Analysis Completion Date	: 04.01.2021
Sample Analysis date	: 28.12.2020		
Method of Testing	: IS: 6582-1971(Reapproved 1992)		

**TEST REPORT**

% Conc [v/v]	No of Fish	Mortality Record				Symptoms of Toxicity
		Time in hours				
		24	48	72	96	
Test (100 %)	10	0	0	0	0	No symptoms of Toxicity were observed

Fish species: *Puntius sophore* (Fresh water minor caro) size: 2.5 to 3.0 cm Quality of sample pH: 6.8 and DO: 4.1 mg/L  
 Remarks: Survival of fish at 100% concentration of treated effluent after 96 hours of exposure is 100%

**Dr. SubbaReddy Mallampati**  
**Group Leader-Environment**

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**Report Number : VLL/VLS/20/12172/022  
Issue Date : 2021.02.26  
P.O. Ref : 4561531023  
P.O. Date : 20.09.2019**

Page 1 of 2

**Sample Name : CGP BIO ETP OUTLET WATER**

Sample Collection Date : 10.02.2021	Sample Registration Date : 12.02.2021
Sample Received Date : 12.02.2021	Analysis Completion Date : 24.02.2021
Sample Analysis date : 13.02.2021	
Method of Testing : As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44	

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Schedule-VI of EP Act (Discharge to Inland Surface Water)
1	pH	mg/L	6.8	5.5-9.0
2	Temperature	°C	23.7	Shall not exceed 5°C above the receiving water temperature
3	Colour	Hazen	7	5
4	Odour	Agreeable	Disagreeable	U/O
5	Suspended Solids	mg/L	36	100
6	Particle size of suspended solids	um	112	Shall pass 850 micron IS Sieve
7	Oil and Grease	mg/L	<0.1	10
8	Total Residual Chlorine	mg/L	<0.2	1.0
9	Ammonical Nitrogen as N	mg/L	2.1	50
10	Total kjeldhal Nitrogen	mg/L	5.6	100
11	Free Ammonia as NH <sub>3</sub>	mg/L	<0.1	5.0
12	Biological Oxygen Demand 3 days at 27°C	mg/L	11	30
13	Chemical Oxygen Demand	mg/L	40	250
14	Dissolved Oxygen	mg/L	4.7	-
15	Arsenic as As	mg/L	<0.01	0.2
16	Mercury as Hg	mg/L	<0.001	0.01
17	Lead as Pb	mg/L	<0.01	0.01
18	Cadmium as Cd	mg/L	<0.01	2.00
19	Hexavalent Chromium as Cr+6	mg/L	<0.05	0.01
20	Total Chromium as Cr	mg/L	0.02	2.00
21	Copper as Cu	mg/L	0.04	3.00
22	Zinc as Zn	mg/L	0.27	5
23	Selenium as Se	mg/L	<0.01	0.05
24	Nickel as Ni	mg/L	<0.01	3.00
25	Cyanide as CN	mg/L	<0.02	0.02
26	Fluoride as F	mg/L	1.0	2.00
27	Dissolve phosphate as P	mg/L	1.7	5.00
28	Sulphide as S	mg/L	<0.5	2.00
29	Phenolic Compounds	mg/L	<0.001	1.00
30	Manganese as Mn	mg/L	0.03	2.00
31	Iron as Fe	mg/L	0.74	3.00
32	Vanadium as V	mg/L	0.01	0.02
33	Nitrate Nitrogen as N	mg/L	<0.1	10

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 Odisha- India.**

**Report Number : VLL/VLS/20/12172/022  
 Issue Date : 2021.02.26  
 P.O. Ref : 4561531023  
 P.O. Date : 20.09.2019**

Page 2 of 2

**Sample Name : CGP BIO ETP OUTLET WATER**

Sample Collection Date	: 10.02.2021	Sample Registration Date	: 12.02.2020
Sample Received Date	: 12.02.2021	Analysis Completion Date	: 24.02.2021
Sample Analysis date	: 13.02.2021		
Method of Testing	: IS: 6582-1971(Reapproved 1992)		

**TEST REPORT**

%Conc [v/v]	No of Fish	Mortality Record				Symptoms of Toxicity
		Time in hours				
		24	48	72	96	
Test (100 %)	10	0	0	0	0	No symptoms of Toxicity were observed

Fish species: *Puntius sophore* (Fresh water minor caro) size: 2.7 to 3.2 cm Quality of sample pH: 6.8 and DO: 4.7 mg/L  
 Remarks: Survival of fish at 100% concentration of treated effluent after 96 hours of exposure is 100%

**Dr. SubbaReddy Mallampati  
 Group Leader-Environment**

**ISSUED TO**

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SH-63, Chendipada Road,  
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Report Number : VLL/VLS/21/00057/030  
Issue Date : 2021.04.10  
P.O. Ref : 4561531023  
P.O. Date : 20.09.2019

Page 1 of 2

Sample Name	: CGP BIO ETP OUTLET WATER		
Sample Collection Date	: 24.03.2021	Sample Registration Date	: 26.03.2021
Sample Received Date	: 26.03.2021	Analysis Completion Date	: 09.04.2021
Sample Analysis date	: 27.03.2021		
Method of Testing	: As per APHA 23 <sup>rd</sup> Edition & IS 3025 Part-44		

**TEST REPORT**

Sr.No.	Test Parameters	UoM	Results	Schedule-VI of EP Act (Discharge to Inland Surface Water)
1	pH	mg/L	7.34	5.5-9.0
2	Temperature	°C	24.2	Shall not exceed 5°C above the receiving water temperature
3	Colour	Hazen	5	5
4	Odour	Agreeable	Disagreeable	U/O
5	Suspended Solids	mg/L	43	100
6	Particle size of suspended solids	um	126	Shall pass 850 micron IS Sieve
7	Oil and Grease	mg/L	<0.1	10
8	Total Residual Chlorine	mg/L	<0.2	1.0
9	Ammonical Nitrogen as N	mg/L	1.9	50
10	Total kjeldhal Nitrogen	mg/L	4.7	100
11	Free Ammonia as NH <sub>3</sub>	mg/L	<0.1	5.0
12	Biological Oxygen Demand 3 days at 27°C	mg/L	13	30
13	Chemical Oxygen Demand	mg/L	60	250
14	Dissolved Oxygen	mg/L	4.9	-
15	Arsenic as As	mg/L	<0.01	0.2
16	Mercury as Hg	mg/L	<0.001	0.01
17	Lead as Pb	mg/L	<0.01	0.01
18	Cadmium as Cd	mg/L	<0.01	2.00
19	Hexavalent Chromium as Cr+6	mg/L	<0.05	0.01
20	Total Chromium as Cr	mg/L	0.01	2.00
21	Copper as Cu	mg/L	0.03	3.00
22	Zinc as Zn	mg/L	0.16	5
23	Selenium as Se	mg/L	<0.01	0.05
24	Nickel as Ni	mg/L	<0.01	3.00
25	Cyanide as CN	mg/L	<0.02	0.02
26	Fluoride as F	mg/L	1.1	2.00
27	Dissolve phosphate as P	mg/L	2.3	5.00
28	Sulphide as S	mg/L	<0.5	2.00
29	Phenolic Compounds	mg/L	<0.001	1.00
30	Manganese as Mn	mg/L	0.04	2.00
31	Iron as Fe	mg/L	0.57	3.00
32	Vanadium as V	mg/L	<0.01	0.02
33	Nitrate Nitrogen as N	mg/L	<0.1	10



**Dr. SubbaReddy Mallampati**  
Group Leader-Environment



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Report Number : VLL/VLS/21/00057/030  
 Issue Date : 2021.04.10  
 P.O. Ref : 4561531023  
 P.O. Date : 20.09.2019

Page 2 of 2

Sample Name	: CGP BIO ETP OUTLET WATER		
Sample Collection Date	: 24.03.2021	Sample Registration Date	: 26.03.2021
Sample Received Date	: 26.03.2021	Analysis Completion Date	: 09.04.2021
Sample Analysis date	: 27.03.2021		
Method of Testing	: IS: 6582-1971 (Reapproved 1992)		

**TEST REPORT**

% Conc (v/v)	No. of Fish	Mortality Record				Symptoms of Toxicity
		Time in hours				
		24	48	72	96	
Test (100 %)	10	0	0	0	0	No symptoms of Toxicity were observed

Fish species: *Puntius sophore* (Fresh water minor caro) size: 2.9 to 3.6 cm Quality of sample pH: 7.3 and DO: 4.9 mg/L  
 Remarks: Survival of fish at 100% concentration of treated effluent after 96 hours of exposure is 100%

Dr. SubbaReddy Mallampati  
 Group Leader-Environment

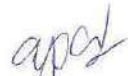
Ref. No.: EMD/LAB/2020-21/115

Date: 15.10.2020

**AMBIENT NOISE MONITORING REPORT**

Area : Plant Area  
 Monitoring date : 08.10.20  
 Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	Kaliakata gate (N20°53.99' E84°59.14')	71.1	59.4
2	Labor hutment gate (N20°53.17' E84°59.90')	72.1	57.2
3	Golabandha gate (N20°51.95' E85°00.06')	70.3	61.9
4	DRI gate (N20°52.75' E84°58.88')	73.2	68.1
5	Backside of CGP (N20°53.79' E84°59.62')	69.7	60.5
6	Phase 2 gate (N20°53.45' E84°58.89')	72.9	64.2
7	Sankerjang gate (N20°51.73' E84°59.48')	69.7	59.4
<b>Standard</b>		<b>75</b>	<b>70</b>

  
 Lab (I/C)

  
 HOD (EMD)

Ref. No.: EMD/LAB/2020-21/133

Date: 16.11.2020

**AMBIENT NOISE MONITORING REPORT**

Area : Plant Area  
Monitoring date : 12.11.20  
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	Kaliakata gate (N20°53.99' E84°59.14')	70.3	54.6
2	Labor hutment gate (N20°53.17' E84°59.90')	72.6	59.4
3	Golabandha gate (N20°51.95' E85°00.06')	73.4	60.7
4	DRI gate (N20°52.75' E84°58.88')	72.5	67.8
5	Backside of CGP (N20°53.79' E84°59.62')	69.8	61.5
6	Phase 2 gate (N20°53.45' E84°58.89')	70.6	60.6
7	Sankerjang gate (N20°51.73' E84°59.48')	69.7	58.4
<b>Standard</b>		<b>75</b>	<b>70</b>

*apat*  
Lab (I/C)

*[Signature]*  
HOD (EMD)

Ref. No.: EMD/LAB/2020-21/152

Date: 12.12.2020

**AMBIENT NOISE MONITORING REPORT**

Area : Plant Area  
Monitoring date : 04.12.20  
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	Kaliakata gate (N20°53.99' E84°59.14' )	71.6	56.7
2	Labor hutment gate (N20°53.17' E84°59.90')	70.8	64.1
3	Golabandha gate (N20°51.95' E85°00.06')	70.2	62.3
4	DRI gate (N20°52.75' E84°58.88')	73.6	68.1
5	Backside of CGP (N20°53.79' E84°59.62')	70.9	62.7
6	Phase 2 gate (N20°53.45' E84°58.89')	74.0	67.1
7	Sankerjang gate (N20°51.73' E84°59.48')	72.3	65.2
<b>Standard</b>		<b>75</b>	<b>70</b>

*apal*  
Lab (I/C)

*[Signature]*  
HOD (EMD)



Ref. No.: EMD/LAB/2020-21/169

Date: 15.01.2021

**AMBIENT NOISE MONITORING REPORT**

Area : Plant Area  
Monitoring date : 08.01.21  
Monitoring done by : EMD

Sl. No.	Location	Result dB (A) Leq	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	Kaliakata gate (N20°53.99' E84°59.14')	70.3	51.2
2	Labor hutment gate (N20°53.17' E84°59.90')	71.2	61.7
3	Golabandha gate (N20°51.95' E85°00.06')	72.8	58.4
4	DRI gate (N20°52.75' E84°58.88')	70.3	64.8
5	Backside of CGP (N20°53.79' E84°59.62')	73.8	63.7
6	Phase 2 gate (N20°53.45' E84°58.89')	71.9	62.8
7	Sankerjang gate (N20°51.73' E84°59.48')	72.4	62.8
<b>Standard</b>		<b>75</b>	<b>70</b>

*apal*  
Lab (I/C)

*[Signature]*  
HOD (EMD)

Ref. No.: EMD/LAB/2020-21/187

Date: 16.02.2021

**AMBIENT NOISE MONITORING REPORT**

Area : Plant Area  
Monitoring date : 10.02.21  
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	Kaliakata gate (N20°53.99' E84°59.14')	72.6	64.8
2	Labor hutment gate (N20°53.17' E84°59.90')	74.1	67.9
3	Golabandha gate (N20°51.95' E85°00.06')	72.6	68.2
4	DRI gate (N20°52.75' E84°58.88')	71.9	62.8
5	Backside of CGP (N20°53.79' E84°59.62')	70.7	62.5
6	Phase 2 gate (N20°53.45' E84°58.89')	74.6	67.1
7	Sankerjang gate (N20°51.73' E84°59.48')	73.6	63.4
<b>Standard</b>		<b>75</b>	<b>70</b>

*apad*  
Lab (I/C)

*[Signature]*  
HOD (EMD)


Ref. No.: EMD/LAB/2020-21/204

Date: 11.03.2021

**AMBIENT NOISE MONITORING REPORT**

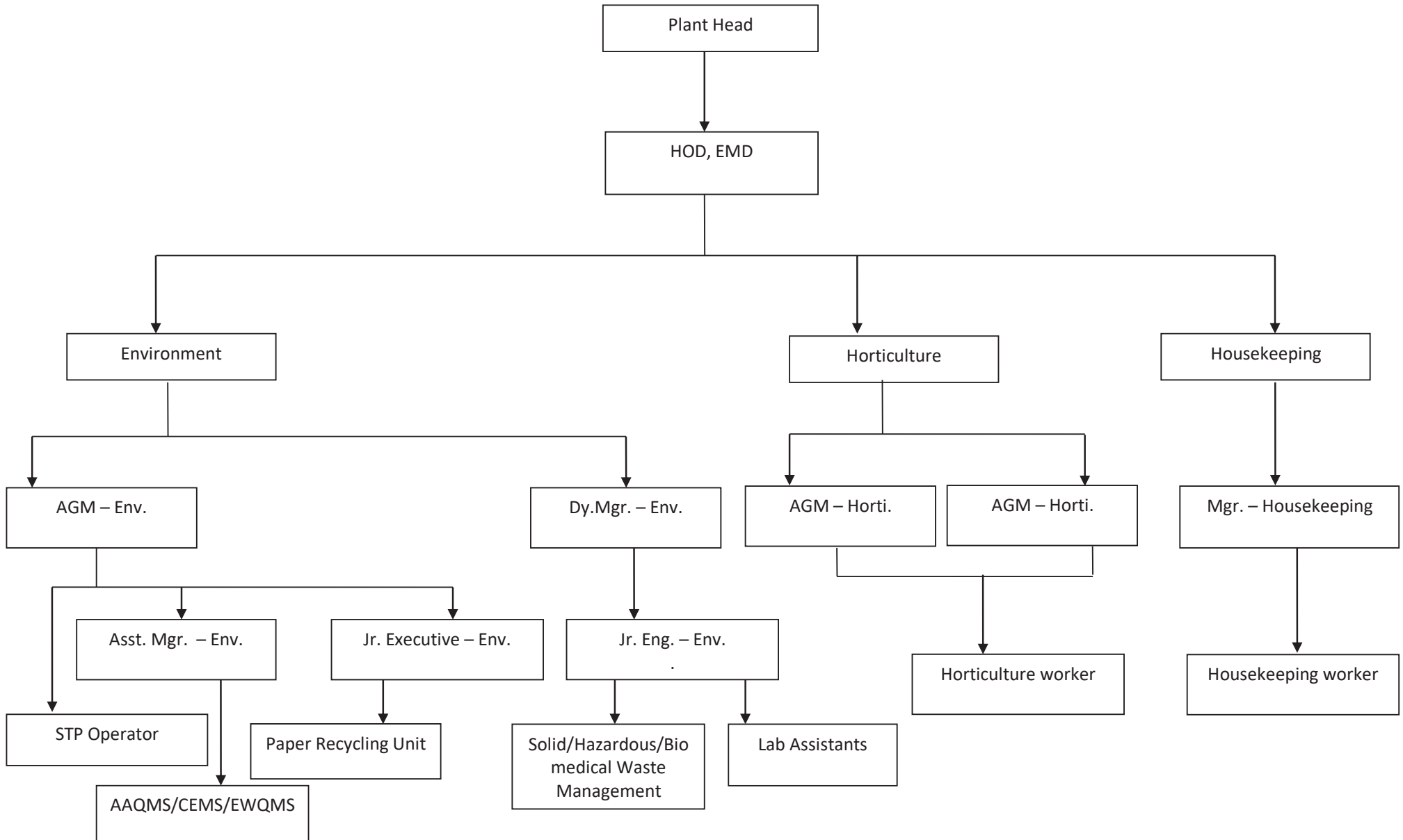
Area : Plant Area  
Monitoring date : 09.03.21  
Monitoring done by : EMD

Sl. No.	Location	Result dB (A)	
		Day time (6 am – 10 pm)	Night time (10 pm – 6 am)
1	Kaliakata gate (N20°53.99' E84°59.14')	71.7	63.4
2	Labor hutment gate (N20°53.17' E84°59.90')	72.8	66.4
3	Golabandha gate (N20°51.95' E85°00.06')	70.1	67.1
4	DRI gate (N20°52.75' E84°58.88')	73.7	67.6
5	Backside of CGP (N20°53.79' E84°59.62')	69.4	61.2
6	Phase 2 gate (N20°53.45' E84°58.89')	73.8	68.9
7	Sankerjang gate (N20°51.73' E84°59.48')	72.4	62.7
<b>Standard</b>		<b>75</b>	<b>70</b>

  
Lab (I/C)

  
HOD (EMD)

**ORGANOGRAM OF ENVIRONMENT MANAGEMENT DEPARTMENT**





**List of Instruments present in EMD Lab**

Sl. No.	Name of the equipment	Make	Model	Total number
1	Digital Balance	Denver	SI234	1
2	pH meter	Sistronics	6793	1
3	Turbidity meter	Sistronics	431	1
4	UV Spectrophotometer	Shimatzu	UV1800	1
5	Ion selective electrode	Thermo Fisher	VSTAR	2
6	Portable DO meter	WTW	DUROX 325	1
7	BOD self check	Velp	BOD EVO sensor	6
8	BOD incubator	ACMAS	OR403	1
9	COD digester	Spectra Lab	2015M	1
10	Flame photometer	BWB	BWB XP	1
11	Hot air oven	Acmas	ACM220661	1
12	Oil & grease analyzer	Horiba	OCMA 350E	1
13	Water level indicator	Insitu INC		1
14	Portable TDS meter	Hach	Pocket Pro Multi 2	1
15	Hot Plate	Unitech	UTS1.27C	1
16	Water Bath	Unitech	UTS1.05A	1
17	Flue gas analyzer	Kane	KM9106	2
18	Stack monitoring kit	Envirotech	APM620 & VSS1	2
19	PM10 analyzer	Envirotech	APM460BL	8
20	PM2.5 analyzer	Envirotech	APM550	8
21	Sound level meter	Cirrus & Quest	CR171B & DLX	2
22	Area heat stress monitor	Quest	3M	1
23	Anemometer	Pacerist	DA 400	1
24	Online ambient air quality monitoring analyzer	Environnement SA		4
25	Online Meteorological station	Ecotech, Australia		2

# JSPL FOUNDATION

THE CSR ARM OF

# JINDAL STEEL & POWER LTD.



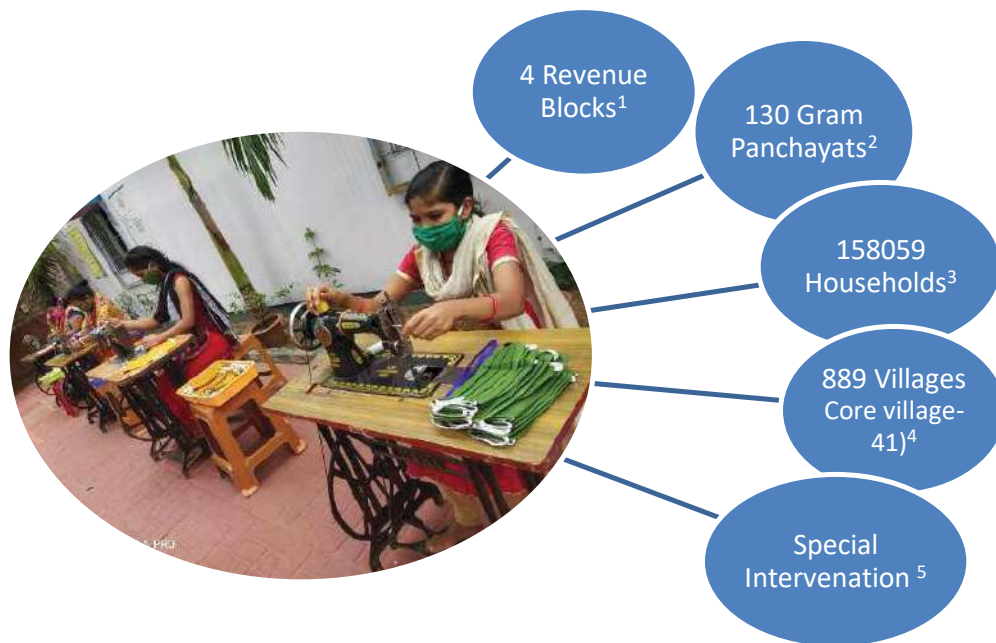
**(1<sup>st</sup> April 2020 – 31<sup>st</sup> March'2021)**

## CORPORATE SOCIAL RESPONSIBILITY (CSR)

*JSPL Foundation is the executing arm of Jindal Steel and Power Limited (JSPL) Group CSR activities which works with the community near business operations of the JSPL group as well as other parts of the country.*

JSPL Foundation is dedicated to the cause of humanity and is focused upon improving the Human Development Index by way of positioning itself as a parenting force of various Social Change Agents operating at the ground level. The Foundation has been guiding force of the sustainable social development initiatives implemented by Jindal Steel & Power across its business locations. The CSR interventions are focused on enhancing quality of life of the community in the vicinity of business locations by way of improving community healthcare and education, and also developing critical small civic infrastructures besides generating sustainable livelihood option, promoting sports, art and culture.

The Foundation has aligned its programmes with the Government and other developmental agencies with an objective of bringing about a radical transformation in the lives of the communities and integrating them into the mainstream development process of the country. The Foundation drives holistic community initiatives to help address some of the persistent social challenges in the realms of Healthcare, Water and Sanitation, Education & Skill Development, Infrastructure & Community Development, and Empowerment of Women. It strongly believes that sustainable community development is essential for harmony between the community and the industry. It endeavours to make a positive contribution to the underprivileged communities by supporting a wide range of socio-economic, educational and health initiatives.



Core Block: Chhendipada and Banarpal. Additional Block: Pallahara (Project SNEHA) and Angul (Kishori Express)

<sup>2</sup>Core GP (16 of Chhendipada and Banarpal), Kishori Express (Angul – 34, Banarpal – 35, Chhendipada – 34 = 103 GPs), Project SNEHA (Pallahara - 27 GPs)

<sup>3</sup>Households: 8227 households and Special projects 2565 Households=10792.

<sup>4</sup>Village (core village 41 of Chhendipada and Banarpal), Kishori Express (Angul – 230, Banarpal – 156, Chhendipada – 184), Project SNEHA (Pallahara - 319)=889

<sup>5</sup> Special Intervention village: **1. Kishori Express** -: Chhendipada (184), Banarpal (156) and Angul (230) Blocks of Angul **2. Project SNEHA** -: Pallahara (319) **3. Watershed Management** -:Banarpal (5), **4. Address SAM** -: Banarpal (12), Chhendipada (10) *Note: Village number of Sl. 3 & 4 included in villaae number of Sl. No. 1.*

### **COVID-19 Response (March'2020 to March'2021)**

- >170000 meals as Cooked food & Dry Ration provided for Street Dwellers, Truckers, stranded migrants and inmates of different destitute home of Women, Old Age Home and child care homes.
- > 3,50,000 Face cover Masks stitched by WSHGs promoted by JSPL Foundation. The SHG Members are able to earn a fair amount everyday by stitching these masks.
- > 1.20 lakh masks provided to the Community members, Workforce and COVID Warriors.
- The mask and hygiene kit provide to all (3276) Anganwadi Worker & Helpers of Angul District.
- All the Jail inmates of Angul jail were provided nose mask, sanitizer and handwash.
- >603061 villagers were sensitized on COVID-19 by CSR-Team members through Whats app Message, audio visual message, Postering etc.
- Everyday more than 2000 beneficiaries are benefited through supplying safe drinking water.
- 150 farmers and 200 diary farmers benefited to sell their vegetable every day inside of the Jindal Township during lockdown period
- Home based rehabilitation session are being conducted for 57 Special children by the Therapist of Asha The Hope.
- Children from Class II to X from DAV Savitri Jindal School benefitted through online classes.
- Support extended for sanitization at community places in the periphery villages and Angul Municipality where >20000 community members were benefitted.
- To avoid the protein deficiencies of malnourished children at Pallahara Block, Soya chunk was provided to 90 malnourished children for 6 months.
- Liquid Medical Oxygen is being provided to the COVID Hospitals for the use of COVID-19 affected person.

### **OTHER HEALTH INITIATIVES**

- Kishori Express, an anaemia control programme for adolescent girls is implemented in Banarpal & Angul blocks of Angul district through two customized vehicle equipped with a LCD screen, trained staff, sanitary napkins, haemometer, hand-washing kits, IFA tablets, IEC materials. It aims at improving the health of adolescent girls through regular hemoglobin check-up, awareness creation, as well as nutrition supplementation. In the reporting period 2020-21, due to the lock down for COVID-19 pandemic the vehicle was not able to move at village level from April'2020 to October'2020. However Awareness through whatsapp message, mobile call, sensitisation camp with small group, postering etc have been conducted to sensitised the girls where 32237 numbers of girls are benefited. From November'2020, the vehicles were allowed to continue the field level activities where 14960 adolescent girls were benefitted. During the reporting year total 47197 girls were covered under Kishori Express activities in two Blocks. From the year 2011 we have covered 1.87 lakhs adolescent girls through this innovative initiative changing the quality of life of rural girls. Under the Project the JSPL Foundation Swayamprabha Award was announced for the Adolescent girls who had successfully fought their own health adversities and excelled in their studies and other co-curricular activities. This year 2 girls were awarded JSPL Foundation Swayamprabha Award during the District level celebration of International Women's Day-2021.



- A total of 29271 high risk populations have been covered under HIV/AIDS programme through ICTC, TI Agency (UtkalSevakSamaj). This includes the employees, contractual workers, migrant workers, ANC mothers and truckers.
- The health care centre which was inaugurated by CDMO Angul on 2<sup>nd</sup> August 2017 is providing its service to the people of 9 periphery villages. During the reporting period 3867 patients were catered through the centre.
- As the part of the preventive health care through community based health awareness, 813061 populations have provided with the knowledge on Personal Hygiene, Mother and child care, 1000 day approach, Vector born disease control, sanitation & Hand wash, HIV/AIDS etc. Special focus given on the precautionary measure for prevention of Corona Virus, villagers were sensitized on COVID-19 through Whats app Message, audio visual message, Postering etc.
- During the reporting year, the new project namely National Trucker's Eye Health Programme was started. The project envisages to reach out to the truck drivers and providing them with primary eye health services in the Transport Nagar-JSPL Campus located in Angul district, Odisha. It is the plant location of Jindal Steel and Power Limited (JSPL), where large number of Truckers are being captured for delivering eye health services following an "ease of access mode" to help the drivers make most use of it. The objective of the project is to increase the uptake of refractive error and referral services among the occupational truck driving community in the target locations and to create accessible and smooth connections for spectacle distribution among the project beneficiaries. During the year 900 truckers are benefitted under the project.
- During the reporting year, Corporate pledged was signed with District Tuberculosis Cell to support the TB Elimination activities for our employee and peripheral areas under Employer Led Model. Under the Programme 25275 villagers were benefitted in sensitization and screening programme.
- 107 Units of Blood collected through Voluntary Blood Donation Camps in collaboration with the District Red Cross Society. It was handed over to District Blood Bank for the benefit of critical patient.
- Nutri-garden (Mo UpakariBagicha) was developed in 95 Anganawadi center where Adolescent girls, pregnant women, lactating mothers and preschool children are being benefitted.
- To provide safe drinking water to the villagers of nearby villages two cold drinking water vehicles are in operation since July 2015 and March 2017. During the reporting period, both the vehicles have provided water to 756726 population of the plant vicinity.
- Under the special project SNEHA, supplementary Nutritional and Health care support has been provided for 120 in-house children of Adruta Children (an Orphanage) Home. Through the project Nutrition supplementation, health check-up and Counseling was conducted for the children. This year a Multipurpose hall was constructed and handed over to Aruta Management with dining sets and library support for the children.
- With an objective of eradication of hunger among the children of Primitive Tribes, since 2017, the Project SNEHA is operational at interior pocket of Pallahara Block in partnership with District Administration, ICDS & Health Deptt.. Due to difficult terrain and scattered inhabitation it was a very difficult task for the children (3-6 year age) of tribal communities to access quality food from the tagging AnganawadiCenter which was

leading to child malnutrition, later into acute malnourishment. In the Phase I of the project, JSPL Foundation had provided food materials to all the identified 1206 children and in the second phase JSPL foundation was asked to focus on three aspects i.e. Supply of Hygiene Kit, Providing Incentive to Anganwadi Worker & Helper and organising quarterly health camp for malnourished children. Whereas National Health Mission, Integrated Child Development Services and Rural Water Supply and Sanitation of Pallahara look after the other aspects to bring development among the health condition of these children and their family. In the phase III, ICDS started providing hot cooked meals to the children through WSHGs in the block to 1206 targeted children of the age group (3-6 years) and Health deptt. was scheduled to conduct the Health camp. JSPL Foundation has been given the responsibilities which were identified as critical gap for effective implementation of the project like incentive to WSHG Members for preparing and serving food to the children, Incentive to Anganawadi worker and helper for the enhancement of nutritional status of malnourished child, conducted health and awareness camp.

During this reporting year due to the Covid-19 restriction all Anganawadi's were closed and dry ration was provided to the doorstep of children. Hence the modalities was changed and 188 numbers of baby weighing scale & 188 numbers of height meter were provided to CDPO, Pallahara for ensuring growth monitoring of the children. Under the programme 12846 children (0-5year age group) were benefitted.

#### **QUALITY EDUCATION:**

- Supplementing government efforts for infrastructure facilities at school, improving classroom amenities for students in the community and providing teaching and learning support material in the vernacular medium schools.
- Augmentation of employability & job orientation of youth through skill building courses at O.P Jindal Community College to 18544youths (cumulative).
- To improve the Teachers Student Ratio in 24 schools (1:76 to 1:25) through support of 36 Voluntary Community Teachers in 18 villages. The programme benefitted 3736 Students.
- Pre-school facilities (Parambha) at Badamahitala with nutritional supplementation program to 25 children. During the reporting year Preschool are being closed due to COVID-19.
- JSPL Foundation in collaboration with Augustus Prison and Social Welfare Services' provided Teaching and Learning Materials to 82children of the Jail inmates of Angul Jail. Children of the poor Jail Inmates are having access to study materials to pursue their study.
- OP Jindal Scholarship is provided to meritorious students every year to pursue their education. In FY 2020-21, 33 students have received scholarship under categories like OP Jindal Jewel and OP Jindal Star.
- **Asha The Hope**, a special project has been initiated for children with disabilities. Through the project Physiotherapy, Occupational therapy, Special education, Speech therapy and audiometry, Music and Recreational Therapy, Counselling-guidance services, skill development training etc. will be delivered to enable them lead an independent life. In the reporting period, 87 children are benefitted through the project. Though the centre was closed due to COVID-19 but the service are being provided at the door step of children by the Therapists.
- During the reporting year necessary support was provided to 4 AnganwadiCenter for creating as Model Anganwadi in the district. Under the initiative, child friendly bench desk

and other required support were provided where 92 preschool children were benefitted under the project.

### **GENERATING SUSTAINABLE LIVELIHOOD OPTIONS FOR THE COMMUNITY & WOMEN'S EMPOWERMENT:**

- Women Empowerment and skill building programme is a flagship project of JSPL Foundation at Angul which is also known as Jan Jeevika Kendra (JJK). Presently 355 women are associated with the different income generating activities namely herbal body care product making, Food processing & preservation, diversified Jute item production, incense stick making, Tailoring, Phenyle making, and sanitary napkin production vegetable cultivation, mushroom cultivation, Bee keeping, Community diary, vermi composting, azolla farming etc. Women from the periphery villages after completing their household chores come to the centre and work for their livelihood which not only add to their income but also boost their self-confidence and social status. Under the skill building programme 2782 women were benefitted.
- Around 45 artisans are engaged in making terracotta products. These women are working on electric wheel and are provided value added training for making household decorative items which has high demand in the market. With the intervention of JSPL Foundation, the artisans are registered at DIC and they have their registration Number, Craftmanship certificate and all are insured under the Government scheme. The artisans also participate in the different craft fairs and exhibit their products. These artisans are engaged in Kudua making (Earthen pots) for preparation of Prasad for Lord Jagannath in Temples and terracotta items.
- "Sugandhi"- incense stick manufacturing unit – a joint initiative by ORMAS, JSPL and ITC Ltd in Public Private Partnership mode.
- The Milk Collection cum Distribution Centre - is running successfully by a farmers group. This unit is connected to 4 milk clusters comprising of 200 farmers from the nearby villages. The average milk collection is 18800 litres per month which is being marketed inside JSPL Township and is generating an income of Rs4154 per month per farmer's family.
- **Strengthening of Existing Technology and capacity building initiative in Agriculture:** To strengthen the agriculture output and to increase the production, the farmers are being exposed and trained on different scientific technology through different agencies like KrishiVigyan Kendra (KVK) and ATMA. In this reporting period hand holding support given to 3692 farmers for cultivating different crops which are fetching them an additional income of Rs.15000/- to Rs. 25000/- per person per year.

### **SPORTS, YOUTH & CULTURAL BONDING:**

- Due to COVID-19 Pandemic sports activities were not undertaken during the reporting year. However, Youth groups and village sports team members were sensitised by our Field Animator on COVID-19 Prevention. Regular fitness exercises on open fields being conducted. Gym equipment were provided to the villagers where 1920 youths are being benefitted.

## **NATURAL RESOURCE MANAGEMENT:**

- Two Micro-Watershed Management Projects are being supported by JSPL Foundation in partnership with the National Bank for Agriculture & Rural Development (NABARD) in order to address the issues of soil erosion, deforestation, sedimentation of water harvesting structures etc. through low-cost and locally available technologies like in-situ soil and moisture conservation measures, afforestation etc. and through a participatory approach that seeks to secure close involvement of the user-communities. The onus of implementing the project lies with the Village Watershed Committees which is working in close guidance of the Project Facilitating Agency, Maulana Azad SamajikEvamShaikshnikParishad (MASSP). The project is covering 5 villages namely Tubey, Maratira, Kulei, Derjang&Madhiamunda. 9000 villagers are being benefitted through implementation of an integrated programme on soil, water & biomass conservation, ground water recharge and enhancing agricultural production and productivity on a sustainable basis. The sustainable phase of the project is running with full swing in close guidance of the Project Facilitating Agency, Maulana Azad SamajikEvamShaikshnikParishad (MASSP) with the financial support from NABARD and JSPL. Under the project 9000 villagers are being benefitted.

## **AWARDS & RECOGNITIONS DURING 2020-21:**

- Golden Peacock CSR Award 2020
- 7<sup>th</sup> CSR India Summit & Expo-2020- Green Tech CSR India 2020 award for promotion of health care.
- Assocham Award for Women Empowerment.
- CMO Asia Award
- Mahatma CSR Award for fighting human misery during Covid-19

## **Expenditure (in Crore Rupees) under Corporate Social Responsibility, JSPL Angul**

Sl. No.	Development Initiatives	Expenditure (in Crore Rupees) under CSR	
		2020-21 (Apr 20-Mar'21)	Cumulative 2005 - till 31stMarch' 2021
1	Community Health Care	1.02	9.01
2	Education and Skill Building & Employability	1.37	21.13
3	Rural Development	0.21	27.43
4	Sustainable Livelihood Activities and Natural Resource Management	0.34	6.74
5	Sports, Art& Culture	0.08	1.22
6	Policy (Calamity Management & Social Welfare and Others)	1.18	29.48
	<b>TOTAL</b>	<b>4.20</b>	<b>95.01</b>



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# Vimta

Driven by Quality. Inspired by Science.

**ISSUED TO**

**M/s. Jindal Steel and Power Limited,  
SH-63, Chendipada Road,  
Jindal Nagar, Angul-759111,  
Odisha- India.**

Report Number : VLL/VLS/20/06494/012  
Issue Date : 2020.11.06  
Your Ref : 4561531023  
And Date : 20.09.2019

Page 1 of 1

**TEST REPORT**

Date of sampling:	16.10.2020		
Sampling time:	14:00 – 15:30		
Sampling location:	Power Plant Unit 2		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal + Waste Gas		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	RCC		
Installed capacity:	135 MW		
Running load:	89 MW		
Fuel used:	Coal & Waste Gas		
Fuel consumption:	Coal: 64 TPH & Gas: 32000 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	116		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	16.6		m/s
Quantity of Gas Flow	487800		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	11.1		%
Carbon Dioxide (CO <sub>2</sub> )	9.3		%
Carbon Monoxide (CO)	350		mg/Nm <sup>3</sup>
Mercury as Hg	0.17	0.3	Mg/Nm <sup>3</sup>

**Dr. SubbaReddy Mallampati**  
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**TEST REPORT**

Date of sampling:	16.10.2020		
Sampling time:	09:30 – 11:00		
Sampling location:	Power Plant Unit 5		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal + Waste Gas		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	RCC		
Installed capacity:	135 MW		
Running load:	56 MW		
Fuel used:	Coal & Waste Gas		
Fuel consumption:	Coal: 32 TPH & Gas: 31,000 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	112		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	14.9		m/s
Quantity of Gas Flow	441180		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	7.9		%
Carbon Dioxide (CO <sub>2</sub> )	12.2		%
Carbon Monoxide (CO)	161.25		mg/Nm <sup>3</sup>
Mercury as Hg	0.14	0.3	mg/Nm <sup>3</sup>


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Report Number : VLL/VLS/20/08088/009A  
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And Date : 20.09.2019

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**TEST REPORT**

Date of sampling:	27.11.2020		
Sampling time:	15:00 – 16:30		
Sampling location:	Power Plant Unit 5		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal + Waste Gas		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	RCC		
Installed capacity:	135 MW		
Running load:	107 MW		
Fuel used:	Coal & Waste Gas		
Fuel consumption:	Coal: 84 TPH & Gas: 33,000 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	131		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	25.6		m/s
Quantity of Gas Flow	727920		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	8.8		%
Carbon Dioxide (CO <sub>2</sub> )	10.2		%
Mercury as Hg	0.08	0.3	mg/Nm <sup>3</sup>

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**TEST REPORT**

Date of sampling:	27.11.2020		
Sampling time:	16:40 – 18:00		
Sampling location:	Power Plant Unit 6		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal + Waste Gas		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	RCC		
Installed capacity:	135 MW		
Running load:	115 MW		
Fuel used:	Coal & Waste Gas		
Fuel consumption:	Coal: 71 TPH & Gas: 32,000 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	125		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	23.9		m/s
Quantity of Gas Flow	689400		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	9.2		%
Carbon Dioxide (CO <sub>2</sub> )	13.6		%
Mercury as Hg	0.06	0.3	mg/Nm <sup>3</sup>



**Dr. SubbaReddy Mallampati**  
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Report Number : VLL/VLS/20/10060/009  
 Issue Date : 2020.12.31  
 Your Ref : 4561531023  
 And Date : 20.09.2019

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**TEST REPORT**

Date of sampling:	24.12.2020		
Sampling time:	10:10 – 11:30		
Sampling location:	<b>Power Plant Unit 3</b>		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal + Waste Gas		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	RCC		
Installed capacity:	135 MW		
Running load:	96 MW		
Fuel used:	Coal & Waste Gas		
Fuel consumption:	Coal: 52 TPH & Gas: 34,000 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
<b>Parameters</b>	<b>Result</b>	<b>Standard</b>	<b>Unit</b>
Moisture	< 5.0		%
Temperature of Flue Gas	128		°C
Stack Gas Barometric Pressure	735.53		mmHg
Velocity	14.4		m/s
Quantity of Gas Flow	4,10,300		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	6.5		%
Carbon Dioxide (CO <sub>2</sub> )	12.4		%
Carbon Monoxide (CO)	116		mg/Nm <sup>3</sup>
Mercury as Hg	0.056	0.3	mg/Nm <sup>3</sup>

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 And Date : 20.09.2019

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**TEST REPORT**

Date of sampling:	24.12.2020		
Sampling time:	11:40 – 13:00		
Sampling location:	<b>Power Plant Unit 4</b>		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal + Waste Gas		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	RCC		
Installed capacity:	135 MW		
Running load:	104 MW		
Fuel used:	Coal & Waste Gas		
Fuel consumption:	Coal: 58 TPH & Gas: 33,000 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
<b>Parameters</b>	<b>Result</b>	<b>Standard</b>	<b>Unit</b>
Moisture	< 5.0		%
Temperature of Flue Gas	118		°C
Stack Gas Barometric Pressure	735.68		mmHg
Velocity	15.62		m/s
Quantity of Gas Flow	4,57,866		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	8.6		%
Carbon Dioxide (CO <sub>2</sub> )	11.4		%
Carbon Monoxide (CO)	78		mg/Nm <sup>3</sup>
Mercury as Hg	0.085	0.3	mg/Nm <sup>3</sup>

**Dr. SubbaReddy Mallampati**  
**Group Leader-Environment**



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**M/s. Jindal Steel and Power Limited,  
SH-63, Chendipada Road,  
Jindal Nagar, Angul-759111,  
Odisha- India.**

Report Number : VLL/VLS/21/12172/013  
Issue Date : 2021.02.26  
P.O. Ref : 4561531023  
P.O. Date : 20.09.2019

Page 1 of 1

**TEST REPORT**

Date of sampling:	09.02.2021		
Sampling time:	11:00 am – 12:00 am		
Sampling location:	Power Plant Unit 1		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	MS		
Installed capacity:	135 MW		
Running load:	112 MW		
Fuel used:	Burning of Coal + Waste Gas		
Fuel consumption:	Coal: 85 TPH+ Waste Gas: 31,500 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	118		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	14.8		m/s
Quantity of Gas Flow	5,47,488		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	8.9		%
Carbon Dioxide (CO <sub>2</sub> )	12.3		%
Carbon Monoxide (CO)	178		mg/Nm <sup>3</sup>
Mercury as Hg	0.019	0.03	mg/Nm <sup>3</sup>



**Dr. SubbaReddy Mallampati**  
**Group Leader-Environment**

**ISSUED TO**

M/s. Jindal Steel and Power Limited,  
 SH-63, Chendipada Road,  
 Jindal Nagar, Angul-759111,  
 Odisha- India.

Report Number : VLL/VLS/21/00057/013  
 Issue Date : 2021.03.27  
 P.O. Ref : 4561531023  
 P.O. Date : 20.09.2019

Page 1 of 1

**TEST REPORT**

Date of sampling:	23.03.2021		
Sampling time:	16:00 – 17:00		
Sampling location:	Power Plant Unit 1		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	MS		
Installed capacity:	135 MW		
Running load:	120 MW		
Fuel used:	Burning of Coal + Waste Gas		
Fuel consumption:	Coal: 105 TPH+ Waste Gas: 33,500 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	123		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	15.0		m/s
Quantity of Gas Flow	5,54,760		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	12.8		%
Carbon Dioxide (CO <sub>2</sub> )	6.46		%
Carbon Monoxide (CO)	18.76		mg/Nm <sup>3</sup>
Mercury as Hg	0.021	0.03	mg/Nm <sup>3</sup>

**Dr. SubbaReddy Mallampati**  
 Group Leader-Environment



**ISSUED TO**

M/s. Jindal Steel and Power Limited,  
 SH-63, Chendipada Road,  
 Jindal Nagar, Angul-759111,  
 Odisha- India.

Report Number : VLL/VLS/21/00057/015  
 Issue Date : 2021.03.27  
 P.O. Ref : 4561531023  
 P.O. Date : 20.09.2019

Page 1 of 1

**TEST REPORT**

Date of sampling:	23.03.2021		
Sampling time:	17:00 – 18:00		
Sampling location:	Power Plant Unit 2		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	MS		
Installed capacity:	135 MW		
Running load:	96 MW		
Fuel used:	Burning of Coal + Waste Gas		
Fuel consumption:	Coal: 82 TPH+ Waste Gas: 29,600 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	119		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	16.7		m/s
Quantity of Gas Flow	6,16,320		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	13.7		%
Carbon Dioxide (CO <sub>2</sub> )	5.67		%
Carbon Monoxide (CO)	27.51		mg/Nm <sup>3</sup>
Mercury as Hg	0.017	0.03	mg/Nm <sup>3</sup>



**Dr. SubbaReddy Mallampati**  
 Group Leader-Environment

**ISSUED TO**

M/s. Jindal Steel and Power Limited,  
 SH-63, Chendipada Road,  
 Jindal Nagar, Angul-759111,  
 Odisha- India.

Report Number : VLL/VLS/21/00057/017  
 Issue Date : 2021.03.27  
 P.O. Ref : 4561531023  
 P.O. Date : 20.09.2019

Page 1 of 1

**TEST REPORT**

Date of sampling:	24.03.2021		
Sampling time:	11:00 – 12:00		
Sampling location:	Power Plant Unit 5		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	MS		
Installed capacity:	135 MW		
Running load:	106 MW		
Fuel used:	Burning of Coal + Waste Gas		
Fuel consumption:	Coal: 100 TPH+ Waste Gas: 30,100 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	124		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	15.3		m/s
Quantity of Gas Flow	5,62,680		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	9.3		%
Carbon Dioxide (CO <sub>2</sub> )	9.89		%
Carbon Monoxide (CO)	36.26		mg/Nm <sup>3</sup>
Mercury as Hg	0.011	0.03	mg/Nm <sup>3</sup>



**Dr. SubbaReddy Mallampati**  
 Group Leader-Environment



**ISSUED TO**

M/s. Jindal Steel and Power Limited,  
 SH-63, Chendipada Road,  
 Jindal Nagar, Angul-759111,  
 Odisha- India.

Report Number : VLL/VLS/21/00057/019  
 Issue Date : 2021.03.27  
 P.O. Ref : 4561531023  
 P.O. Date : 20.09.2019

Page 1 of 1

**TEST REPORT**

Date of sampling:	24.03.2021		
Sampling time:	12:15 – 13:15		
Sampling location:	Power Plant Unit 6		
Stack connected to:	ESP		
Shape of stack:	Circular		
Emission due to:	Burning of Coal		
Height of stack (m):	220		
Height of sampling point (m):	75		
Stack dia at sampling point (m):	3.75		
Material of construction of stack:	MS		
Installed capacity:	135 MW		
Running load:	98 MW		
Fuel used:	Burning of Coal + Waste Gas		
Fuel consumption:	Coal: 81 TPH+ Waste Gas: 28,400 Nm <sup>3</sup> /hr		
Pollution control device:	ESP		
Parameters	Result	Standard	Unit
Moisture	< 5.0		%
Temperature of Flue Gas	127		°C
Stack Gas Barometric Pressure	734.6		mmHg
Velocity	16.1		m/s
Quantity of Gas Flow	4,58,640		Nm <sup>3</sup> /hr
Oxygen (O <sub>2</sub> )	14.3		%
Carbon Dioxide (CO <sub>2</sub> )	4.9		%
Carbon Monoxide (CO)	52.52		mg/Nm <sup>3</sup>
Mercury as Hg	0.016	0.03	mg/Nm <sup>3</sup>



**Dr. SubbaReddy Mallampati**  
 Group Leader-Environment

E-mail: [rospcb.angul@ospboard.org](mailto:rospcb.angul@ospboard.org)

**OFFICE OF THE REGIONAL OFFICER  
STATE POLLUTION CONTROL BOARD, ODISHA**  
(DEPARTMENT OF FOREST & ENVIRONMENT, GOVT. OF ODISHA)  
Plot No. S-3/3, Industrial Estate, Hakimpada, Angul-759143

"By Registered Post"

**CONSENT ORDER**

No..1666.../ RAA/ROSPCB/AGL/23/2021-22

Date: 21.05.2021

**CONSENT ORDER NO.894/2021-22/RO-SPCB/Angul (APC & WPC)**

**Sub: Consent for discharge of sewage and trade effluent under section 25/26 of Water (PCP) Act, 1974 and for existing/new operation of the plant under section 21 of Air (PCP) Act, 1981.**

**Ref: Your online Consent to Operate Application No. 3633953 received in complete form on 20.05.2021.**

Consent to operate is hereby granted under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act, 1981 and rules framed thereunder to:

Name of the Mine: **M/s Orissa Biodiesel Jatropa Pvt. Ltd**

Name of the Occupier & Designation: **Sri Pranab Narayan Sarangi  
(Managing Director)**

Address: **Plot Nos. 322 & 335 Khata No- 379/296  
Area 4.02 Acres and Plot Nos. 155, 168 &  
324, Khata No- 379/302 Area 1.42 Acre  
(Total area 5.44 Acres)  
Mouza: Mukundapur, Tehsil:Angul,  
Dist- Angul**

This consent order is valid for the period up to **31.03.2022**.

This consent order is valid for the product quantity, specified outlets, discharge quantity and quality, specified chimney/stack, emission quantity and quality of emissions as specified below. This consent is granted subject to the general and special conditions stipulated therein.

**A. Details of products manufactured:**

Sl. No.	Product	Area
1.	Filling of low lying area with Fly Ash (2,50,000 Metric Tonne)	5.44 Acres





**B. Discharge permitted through the following outlet subject to the standard**

Outlet No.	Description of outlet	Point of discharge	Quantity of discharge KLD or KL/hr.	Prescribed standard			
				pH	TSS (mg/l)	BOD (mg/l)	Oil & Grease (mg/l)

**C. Emission permitted through the following stack subject to the prescribed standard.**

Chimney Stack No.	Description of stack	Stack height (m)	Quantity of emission	Prescribed standard

**D. Disposal of solid waste permitted in the following manner**

Sl. No.	Type of Solid waste	Quantity generated (TPM)	Quantity to be reused on site (TPM)	Quantity to be reused off site (TPM)	Quantity disposed off (TPM)	Description of disposal site.

**E. GENERAL CONDITIONS FOR ALL UNITS**

- The consent is given by the Board in consideration of the particulars given in the application. Any change of alternation or deviation made in actual practice from the particulars furnished in the application will also be the ground liable for review/variation/revocation of the consent order under section 27 f the Act of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 and to make such variations deemed fit for the purpose of the Acts.
- The industry would immediately submit revised application or consent to operate to the Board in the event of any change in the quantity and quality of raw material/and products/manufacturing process or quantity / quality of the effluent rate of emission/air pollution control equipment/system etc.
- The applicant shall not change or alter either the quality or quantity of the rate of discharge or temperature or the route of discharge without the previous written permission of the Board.
- The application shall comply with and carry out the directives/orders issued by the Board in this consent order and at all subsequent times without any negligence on his part. In case of non-compliance of any order/directives issued at any time and/or violation of the terms and conditions of this consent order, the applicant shall be liable for legal action as per the provisions of the Law/Act.
- The applicant shall make an application for grant of fresh consent at least 90 days before the date of expiry of this consent order.
- The issuance of this consent does not convey any property right in either real or personal property or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State laws or regulation.
- This consent does not authorize or approve the construction of any physical structure or facilities or the undertaking of any work in any natural water course.
- The applicant shall display this consent granted to him in a prominent place for perusal of the public and inspecting officers of this Board.
- An inspection book shall be opened and made available to Board's Officers during the visit to the factory.
- The applicant shall furnish to the visiting officer of the Board any information regarding the construction, installation or operation of the plant or of effluent treatment system/air pollution control system/stack monitoring system any other particulars as may be pertinent to preventing and controlling pollution of Water/Air.
- Meters must be affixed at the entrance of the water supply connection so that such meters are easily accessible for inspection and maintenance and for other purposes of the Act provided that the place where it is affixed shall in no case be at a point before which water has been taped by the consumer for utilization for any purposes whatsoever.
- Separate meters with necessary pipe-line for assessing the quantity of water used for each of the purposes mentioned below:
  - Industrial cooling, spraying in mine pits or boiler feed.
  - Domestic purpose
  - Process
- The applicant shall display suitable caution board at the lace where the effluent is entering into any water-body or any other place to be indicated by the Board, indicating therein that the area into which the effluents are being discharged is not fit for the domestic use/ bathing.
- Storm water shall not be allowed to mix with the trade and/or domestic effluent on the upstream of the terminal manholes where the flow measuring devices will be installed.





15. The applicant shall maintain good house-keeping both within the factory and the premises. All pipes, valves, sewers and drains shall be leak-proof. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
16. The applicant shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems install or used by him to achieve with the term(s) and conditions of the consent.
17. Care should be taken to keep the anaerobic lagoons, if any, biologically active and not utilized as mere stagnation ponds. The anaerobic lagoons should be fed with the required nutrients for effective digestion. Lagoons should be constructed with sides and bottom made impervious.
18. The utilization of treated effluent on factory's own land, if any, should be completed and there should be no possibility of the effluent gaining access into any drainage channel or other water courses either directly or by overflow.
19. The effluent disposal on land, if any, should be done without creating any nuisance to the surroundings or inundation of the lands at any time.
20. If at any time the disposal of treated effluent on land becomes incomplete or unsatisfactory or create any problem or becomes a matter of dispute, the industry must adopt alternate satisfactory treatment and disposal measures.
21. The sludge from treatment units shall be dried in sludge drying beds and the drained liquid shall be taken to equalization tank.
22. The effluent treatment units and disposal measures shall become operative at the time of commencement of production.
23. The applicant shall provide port holes for sampling the emissions and access platform for carrying out stack sampling and provide electrical outlet points and other arrangements for chimneys/stacks and other sources of emissions so as to collect samples of emission by the Board or the applicant at any time in accordance with the provision of the Act or Rules made therein.
24. The applicant shall provide all facilities and render required assistance to the Board staff for collection of samples/stack monitoring/inspection.
25. The applicant shall not change or alter either the quality or quantity or rate of emission or install, replace or alter the air pollution control equipment or change the raw material or manufacturing process resulting in any change in quality and/or quantity of emissions, without the previous written permission of the Board.
26. No control equipments or chimney shall be altered or replaced or as the case may be erected or re-erected except with the previous approval of the Board.
27. The satisfaction the liquid effluent arising out of the operation of the air pollution control equipment shall treated in the manner and to ion of standards prescribed by the Board in accordance with the provisions of Water (Prevention and Control of Pollution) Act, 1974 (as amended).
28. The stack monitoring system employed by the applicant shall be opened for inspection to this Board at any time.
29. There shall not be any fugitive or episodal discharge from the premises.
30. In case of such episodal discharge/emissions the industry shall take immediate action to bring down the emission within the limits prescribed by the Board in conditions/stop the operation of the plant. Report of such accidental discharge/emission shall be brought to the notice of the Board within 24 hours of occurrence.
31. The applicant shall keep the premises of the industrial plant and air pollution control equipments clean and make all hoods, pipes, valves, stacks/chimneys leak proof. The air pollution control equipments, location, inspection chambers, sampling port holes shall be made easily accessible at all times.
32. Any upset condition in any of the plant/plants of the factory which is likely to result in increased effluent discharge/emission of air pollutants and/or result in violation of the standards mentioned above shall be reported to the Headquarters and Regional Office of the Board by fax/speed post within 24 hours of its occurrence.
33. The industry has to ensure that minimum three varieties of trees are planted at the density of not less than 1000 trees per acre. The trees may be planted along boundaries of the industries of industrial premises. This plantation is stipulated over and above the bulk plantation of trees in that area.
34. The solid waste such as sweeping, wastage packages, empty containers residues, sludge including that from air pollution control equipments collected within the premises of the industrial plants shall be disposed off scientifically to the satisfaction of the Board, so as no to cause fugitive emission, dust problems through leaching etc, of any kind.
35. All solid wastes arising in the premises shall be properly classified and disposed off to the satisfaction of the Board by:
  - i. Land fill in case of inert material, care being taken to ensure that the material does not give rise to leachate which may percolate into ground water or carried away with storm run-off.
  - ii. Controlled incineration, wherever possible in case of combustible organic material.
  - iii. Composting, in case of bio-degradable material.
36. Any toxic material shall be detoxicated if possible, otherwise be sealed in steel drums and buried in protected areas after obtaining approval of this Board in writing. The detoxication or sealing and burying shall be carried out in the presence of Board's authorized persons only. Latter of authorization shall be obtained for handling and disposal of hazardous waste.
37. If due to any technological improvement or otherwise this Board is of opinion that all or any of the conditions referred to above requires variation (including the change of any control equipment either in whole or in part) this Board shall after giving the applicant an opportunity of being heard, vary all or any of such condition and thereupon the applicant shall be bound to comply with the conditions so varied.
38. The applicant, his/heirs/legal representatives or assignees shall have no claim whatsoever to the condition or renewal of this consent after the expiry period of this consent.
39. The Board reserves the right to review, impose additional conditions or condition, revoke change or alter the terms and conditions of this consent.





40. Notwithstanding anything contained in this conditional letter of consent, the Board hereby reserves to it the right and power under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 to review any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Act by the Board.
41. The conditions imposed as above shall continue to be in force until revoked under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981.
42. In case the consent fee is revised upward during this period, the industry shall pay the differential fees to the Board (for the remaining years) to keep the consent order in force. If they fail to pay the amount within the period stipulated by the Board the consent order will be revoked without prior notice.
43. The Board reserves the right to revoke/refuse consent to operate at any time during period for which consent is granted in case any violation is observed and to modify/stipulate additional conditions as deemed appropriate.

**F. SPECIAL CONDITIONS:**

1. The Consent to operate for disposal of fly ash shall be co-terminated with the permission granted by the Executive Officer, Talcher Municipality, unless the unit further extends the permission from the local authority for the disposal of fly ash.
2. Reclamation of low lying area shall be carried out as per the guideline prepared by the State Pollution Control Board for the purpose. (copy enclosed)
3. The Thermal Power Plant shall dispose only ash for filling the low lying area. Under no circumstances, the industry shall dispose any other industrial solid waste in the low lying area other than ash without prior permission of the Board.
4. Consent to operate is subject to availability of all other statutory clearances required under relevant Acts / Rules and fulfillment of required procedural formalities.
5. Under no circumstances the low lying area shall be filled up to a level higher than the surrounding area. The ash to be transported for filling of low lying area shall be adequately moistened with water, so that minimum 15% moisture is maintained at the destination.
6. Industry shall protect the water stream/body, if any, flowing adjacent to the site. Protective earthen embankment shall be provided along the stream. Filling of ash shall not obstruct the natural flow of water.
7. The ash shall be dumped into low lying area and spread uniformly by engaging earth moving equipment. The spreading of ash shall be done in layers and compacted followed by concurrent top soil capping before rainy season, so that there shall not be any chance of mixing of the fly ash in nearby water body through rain water.
8. The Industry shall develop the approach road and shall provide adequate water spraying arrangement on the roads when ash is taken from the silo/plant to suppress any fugitive dust generated during working period.
9. All the tippers/trucks responsible for carrying the fly ash shall be covered with tarpaulin so that there shall not be any spillage on the way.
10. In case any accidental spillage on the way, while transporting the fly ash the company shall ensure that spilled fly ash dust shall be transported back to the disposal site as quick as possible.
11. Protective action to be ensured if the ash to be disposed at immediate vicinity of NH/SH.
12. The industry has to provide dust suppression like water sprinkling in and around the dump site. During summer extra care shall be taken to control fugitive dust.
13. For reclamation of land, irrespective of size located within administrative limit of any Municipality / Corporation or if the transportation route passes through its administrative limit, extra care to ensure non spillage of ash and non-congestion of traffic need to be exercised to prevent any pollution during transportation of fly ash.
14. **The following two condition are applicable if the permeability of the site is  $> 10^{-7}$  cm/sec :**
15. If the permeability is more than  $10^{-7}$  cm/sec, the TPP shall provide appropriate lining as mentioned in the guideline at the base layer at the low lying area in order to prevent leaching and risk of ground water contamination.
16. Commencement of fly ash filling shall be made after provision of the lining is verified by the Pollution Control Board's Official and on obtaining necessary permission in this regard.





17. The environmental quality monitoring of air, surface and ground water shall be carried out every month at the boundary of the disposal area for the following parameters and the monitoring report shall be submitted to the Board every quarter.
  - a. Ambient Air - PM<sub>10</sub>, PM<sub>2.5</sub>
  - b. Surface runoff - SS, F, Cd, As
  - c. Soil - SAR
18. **Since the site is located near human habitation, hospital and School premises, filling of ash in the low lying area shall not be done during School hours. Proper care shall be taken to avoid any fugitive emission from the active ash filling area towards school building.**
19. Water quality monitoring shall be done from start of the work till six months beyond completion of work. Air monitoring shall be done till completion of the reclamation work.
20. The area shall be properly fenced to prevent any entry of cattle / Livestock inside the quarry area.
21. After complete reclaiming the site, sign board shall be put up showing that the land was reclaimed by filling low lying area.
22. Attempt shall be made to avoid any kind of public nuisance due to proposed activities.
23. The industry shall submit a report on the utilization of the land annually and all the pollution control measures are being taken properly, the emissions and effluent are conforming to the prescribed standard, and all the consent have been complied with.
24. Public complaint, if any found to be genuine consent to operate order may be viewed seriously and future action may be initiated on the unit as per law.
25. The industry shall abide by all the provisions of E (P) Act 1986 and Rules framed there under.
26. On completion of the reclamation, the TPP shall submit a certificate to the effect that all the above stipulated conditions have been duly complied.
27. The Board may impose further condition or modify the conditions as stipulated in this order and may revoke this order in case the stipulated conditions are not implemented and / or information is found to have been suppressed / wrongly furnished in the application form. If it is found that the industry is operated without adequate pollution control measures and without consent to operate from the Board direction for closure shall be issued under section 31(A) of Air (PCP) Act. 1981 and / or under section 33(A) of Water (PCP) Act, 1974 as the case may be without any further notice.

The occupier must comply with the conditions stipulated in section A,B,C,D,E & F to keep this consent order valid.

To

Sri Pranab Narayan Sarangi (Managing Director)  
M/s Orissa Biodiesel Jatropha Pvt. Ltd  
M/s 397, Sarangi Bhawan( Gr Floor)  
Lewis Road, Old Town, Bhubaneswar-02



REGIONAL OFFICER  
*Regional Officer*  
State Pollution Control Board  
ANGUL

Memo No...../

Dt...../

Copy forwarded to:

- i) The Member Secretary, S.P.C. Board, Odisha, Bhubaneswar
- ii) The Collector and Dist. Magistrate, Angul.
- iii) The AVP (EMD)M/s JSPL, Angul
- iv) Guard file, Regional Office, SPC Board, Angul, Odisha.

REGIONAL OFFICER





## General Standards for discharge of environment pollutant Part-A: Effluents

Sl. No	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Coastal Areas
1	2	3			
		(a)	(b)	(c)	(d)
1	Colour&odour	Colourless/ Odourless as far as practible	-----	See 6 of Annex-1	See 6 of Annex-1
2	Suspended Solids (mg/l)	100	600	200	a. For process wastewater- 100 b. For cooling water effluent 10% above total suspended matter of influent.
3	Particular size of SS	Shall pass 850	-----	-----	
4	-----	-----	-----	-----	-----
5	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6	Temperature	Shall not exceed 5° C above the receiving water temperature	-----	-----	Shall not exceed 5° C above the receiving water temperature.
7	Oil & Grease mg/l max.	10	20	10	20
8	Total residual chlorine	1.0	-----	-----	1.0
9	Ammonical nitrogen (as N) mg/l max.	50	50	-----	50
10	Total Kjeldahl nitrogen (as NH <sub>3</sub> ) mg/l max.	100	-----	-----	100
11	Free Ammonia (as NH <sub>3</sub> ) mg/l max.	5.0	-----	-----	5.0
12	Biochemical Oxygen Demand (3 days at 27°C) mg/l max.	30	350	100	100
13	Chemical Oxygen Demand, mg/l max.	250	-----	-----	250
14	Arsenic (as As) mg/l max.	0.2	0.2	0.2	0.2
15	Mercury (as Hg) mg/l max.	0.01	0.01	-----	0.001
16	Lead (as Pb) mg/l max.	01.	1.0	-----	2.0
17	Cadmium(as Cd) mg/l max.	-----	-----	-----	-----
18	Hexavalent Chromium (as Cr+6) mg/l max.	0.1	2.0	-----	1.0
19	Total Chromium (as Cr) mg/l max.	2.0	2.0	-----	2.0
20	Copper (as Cu) mg/l max.	3.0	3.0	-----	3.0
21	Zinc (as Zn) mg/l max.	5.0	15	-----	15
22	Selenium (as Se) mg/l max.	0.05	0.05	-----	0.05
23	Nickel (as Ni) mg/l max.	3.0	3.0	-----	5.0
24	Cyanide (s CN) mg/l max.	0.2	2.0	0.2	0.02
25	Fluoride (as F) mg/l max.	2.0	15	-----	15
26	Dissolved Phosphates (as P) mg/l max.	5.0	-----	-----	-----
27	Sulphide (as S) mg/l max.	2.0	-----	-----	5.0
28	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) mg/l max.	1.0	5.0	-----	5.0
29	Radioactive Materials a.Alpha emitter micro curie/ml b.Beta emitter micocurie/ml.	10 <sup>7</sup> 10 <sup>8</sup>	10 <sup>7</sup> 10 <sup>6</sup>	10 <sup>5</sup> 10 <sup>7</sup>	10 <sup>7</sup> 10 <sup>6</sup>
30	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
31	Manganese (as Mn)	2 mg/l	2 mg/l	-----	2 mg/l
32	Iron (as Fe)	3 mg/l	3 mg/l	-----	3 mg/l
33	Vanadium (as V)	0.2 mg/l	0.2 mg/l	-----	0.2 mg/l
34	Nitrate Nitrogen	10 mg/l	-----	-----	20 mg/l



CONSENT ORDER

NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No.	Pollutants	Time Weighed Average	Concentrate of Ambient Air		
			Industrial Residential, Rural and other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1.	Sulphur Dioxide (SO <sub>2</sub> ), μg/m <sup>3</sup>	Annual * 24 Hours **	50 80	20 80	-Improved west and Gaeke - Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO <sub>2</sub> ), μg/m <sup>3</sup>	Annual * 24 Hours **	40 80	30 80	- Modified Jacob & Hochheiser ( Na-Arsenite) - Chemiluminescence
3.	Particulate Matter (size less than 10μm) or PM <sub>10</sub> μg/m <sup>3</sup>	Annual * 24 Hours **	60 100	60 100	-Gravimetric - TOEM - Beta Attenuation
4.	Particulate Matter (size less than 2.5μm) or PM <sub>2.5</sub> μg/m <sup>3</sup>	Annual * 24 Hours **	40 60	40 60	-Gravimetric - TOEM - Beta Attenuation
5.	Ozone (O <sub>3</sub> ) μg/m <sup>3</sup>	8 Hours ** 1 Hours **	100 180	100 180	- UV Photometric - Chemiluminescence - Chemical Method
6.	Lead (Pb) μg/m <sup>3</sup>	Annual * 24 Hours **	0.50 1.0	0.50 1.0	-AAS/ICP method after sampling on EMP 2000 or equivalent filter paper. - ED-XRF using Teflon filter
7.	Carbon Monoxide (CO) mg/m <sup>3</sup>	8 Hours ** 1 Hours **	02 04	02 04	- Non Dispersive Infra Red (NDIR) Spectroscopy
8.	Ammonia (NH <sub>3</sub> ) μg/m <sup>3</sup>	Annual* 24 Hours**	100 400	100 400	-Chemiluminescence - Indophenol Blue Method
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) μg/m <sup>3</sup>	Annual *	05	05	-Gas Chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10.	Benzo (a) Pyrene (BaP)-Particulate phase only, ng/m <sup>3</sup>	Annual*	01	01	-Solvent extraction followed by HPLC/GC analysis
11.	Arsenic (As), ng/m <sup>3</sup>	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni), ng/m <sup>3</sup>	Annual*	20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

\*\* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

\*\* 24 hourly or 08 hourly or 01 hourly monitored values, as applicable, shall be complied with 98% of the time in a year, 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.