**Compliance Status of Environmental Clearance of Expansion of Steel Plant (6.8 MTPA to 9.7 MTPA, Crude Steel Production) at Tata Steel Works, Jamshedpur, District East Singhbhum, Jharkhand vide MoEF Letter no J-11011/691/2007-IA.II (I) dated May 11, 2010**

<table>
<tr><th>No.</th><th>Conditions</th><th>Compliance Status</th></tr>
<tr><td colspan="3">Specific Conditions:</td></tr>
<tr><td>i.</td><td>Compliance to all the specific and general conditions stipulated for the existing plant by the Central/State Govt. shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bhubaneswar.</td><td>The six monthly compliance reports are being submitted to the regional office regularly. The report for last 3 years submitted to Regional office at Bhubaneswar is as follows:<br><br>
<table>
<tr><th>Sl. No.</th><th>Six Monthly report</th><th>Submitted on</th></tr>
<tr><td>1</td><td>December 2014</td><td>November 18, 2014 vide letter no. EMD/C-33/175/14</td></tr>
<tr><td>2</td><td>June, 2014</td><td>June 24, 2014 vide letter no. EMD/C-33/116/14</td></tr>
<tr><td>3</td><td>December, 2013</td><td>December 16, 2013 vide letter no. EMD/C-33/237/13</td></tr>
<tr><td>4</td><td>June, 2013</td><td>June 22, 2013 vide letter no. EMD/C-33/124/13</td></tr>
<tr><td>5</td><td>December, 2012</td><td>December 29, 2012 vide letter no. EMD/C-33/330/12</td></tr>
<tr><td>6</td><td>June, 2012</td><td>June 30, 2012 vide letter no. EMD/C-33/192/12</td></tr>
</table>
The six monthly compliance reports along the monitored data is also uploaded in the website(http://www.tatasteelindia.com/ corporate-citizen/environment-compliance-reports.asp)</td></tr>
<tr><td>ii.</td><td>Efforts shall be made to reduce RSPM levels in the ambient air and a time bound action plan shall be submitted. On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, gas cleaning plant, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm$^3$ by installing energy efficient technology. Low NOx burners shall be installed to control NOx emissions. At no time, the emission level shall go beyond the prescribed standards. Interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.</td><td>Sign board have been placed on all the critical areas to keep the speed of the vehicle within 35 kmph to control secondary emission along the internal road (VIP Road) and similarly the vehicle speed is limited to 16 kmph in the units.<br><br>Secondary dust emission inside the plant in different critical areas is being monitored in about 350 locations monthly. The average level of PM during the period April 2014 to March 2015 is 5.7 mg/m$^3$.<br>4 online AAQMS have been commissioned to monitor $PM_{10}$, $PM_{2.5}$, $SO_2$, $NO_2$, CO, $NH_3$ continuously. All other AAQ parameters being analysed by CPCB recognized environment laboratory are also found within prescribed limit.<br><br>Continuous Stack Monitoring System in 40 stacks has been provided.</td></tr>
</table>

| | | |
|---|---|---|
| iii. | Existing electrostatic precipitator (ESP) shall be upgraded and provided to new units to control gaseous emissions within 50 mg/Nm$^3$. ESPs shall be provided to pellet plant, cast house and stock house of blast furnaces and LD#3 shop. Waste gas from the drying and grinding unit of pellet plant shall be cleaned by bag filters. Adequate provisions shall be made to control NOx emissions. Bag house shall be provided to Lime kilns. Data on ambient air quality stack emissions and fugitive emissions shall regularly submit to the Ministry's Regional Office at Bhubaneswar, Jharkhand Pollution Control Board (JPCB) and Central Pollution Control Board (CPCB) once in six months. | Low NOx burners have been provided in all the units of 6.8 & 9.7 MTPA project. Similarly Low NOx burners have also been provided in same at the units of the expansion of 4 MTPA to 5 MTPA.<br><br>Similarly in almost all the units interlocking facility have been provided in case of units exceed any prescribed emission level.<br>There is a proposal to upgrade all the ESP of Sinter Plant (SP), F & G Blast Furnace & LD1 & LD2 steel melting shops. Among these 5 ESP i.e. 1 of SP1, 1 of SP2, 3 of SP3 have already been upgraded by the agency. The agreed emission for their upgraded emission has been guaranteed to be 50 mg/Nm$^3$ with an efficiency of 99.9%.<br><br>ESPs have been provided in pellet plant (Hood Stack, Wind Box Stack and Central dedusting stack) and bag filters in other areas where dedusting as the main criteria.<br><br>Bag Filters are provided in the Cast House and Stock House of H and I Blast Furnace each. 3 bag filters have been provided in the pellet plant to control waste gas from the drying and grinding unit of pellet plant. 12 Nos. of Bag House have been provided in Lime Plant.<br><br>4 online AAQMS have been commissioned to monitor $PM_{10}$, $PM_{2.5}$, $SO_2$, NOx, CO, $NH_3$ continuously. All other AAQ parameters being analysed by CPCB recognized environment laboratory are also found within prescribed limit.<br>There is one mobile monitoring facility & 20 manual AAQMS located both inside the plant and also outside the plant area. Monitoring report is being submitted to JSPCB, CPCB and Regional Office. |
| iv. | Land based fume extraction system shall be provided to coke oven battery # 10 and 11 to arrest fugitive emissions during charging and pushing operations. The coke oven gas shall be desulphurized by reduction of $H_2S$ content of coke oven gas in the by-product recovery section to below 500 mg/Nm$^3$. On-line charging with high pressure liquor aspiration (HPLA) for extraction of oven gas, leak proof oven doors, hydraulic door and door frame cleaner, water sealed AP caps and charging & pusher side emission extractor device shall be provided for the coke oven batteries to maintain VOC | Land based fume extraction, desulphurization facilities, online charging with HPLA, Hydraulic door and door frame clearance, water seal AP caps and charging and pusher side emission extractor device etc were in place in both coke ovens battery 10 & 11 to minimize leaks from doors CAPs, etc and also to meet the CREP recommendations. Coke oven gas is being desulphurised in Battery 10&11. The monitoring reports shows that $H_2S$ content is below 300 mg/Nm$^3$. |

<table>
<tr><td></td><td>emissions within permissible limit. Land based fume extraction system for pushing emission control from coke ovens shall be provided.</td><td></td></tr>
<tr><td>v.</td><td>All the standards prescribed for the coke oven plants shall be followed as per the latest guidelines. Proper and full utilization of coke oven gases in power plant using heat recovery steam generators shall be ensured and no flue gases shall be discharged into the air. Sulphur shall be recovered from the coke oven gases from new product plant.</td><td>In FY 15, new Coke Oven Battery no.11 was commissioned in April 2014 and existing Battery no. 3 has been retired in October 2014. As per the CREP guidelines, % of PLD, PLL & PLO of all batteries are being monitored thrice in a month. The max % of PLD is found to be 6.9 in Battery#5, max % of PLL found to be 0.9 in battery#3, 6, 7 & 10 and % of maximum PLO is found to be 2.1 in Battery#3 and maximum charging emission is found to be 57 sec in Battery#3.<br>Byproduct gas is recovered and used for power generation and heating purpose. 112.06 MW power generated in captive Power House # 3, 4 and 5 in 2014-15. Similarly sulphur is also recovered from coke oven gas and sold to authorized buyers.
<table>
<tr><th>Sl. No.</th><th>By Products</th><th>Quantity Generated in 2014-15</th><th>Used for</th></tr>
<tr><td>1</td><td>CO Gas</td><td>1,72,031 $Nm^3/Hr$</td><td>Power generation, heating</td></tr>
<tr><td>2</td><td>BF Gas</td><td>18,62,425 $Nm^3/Hr$</td><td>Power generation, heating</td></tr>
<tr><td>3</td><td>LD Gas</td><td>51,852 $Nm^3/Hr$</td><td>Power generation, heating</td></tr>
<tr><td>4</td><td>Sulphur</td><td>1018 Tonnes</td><td>Sold to auth. parties</td></tr>
<tr><td>5</td><td>Coal Tar</td><td>116,485 tonnes</td><td>Blast Furnace fuel Injection, Pellet Plant</td></tr>
</table></td></tr>
<tr><td>vi.</td><td>Only dry quenching method in the coke oven in new battery # 10 & 11 shall be adopted.</td><td>Coke Dry quenching (CDQ) facility is under construction in the new Coke Oven Battery # 10 and 11. The project likely to be completed by year 2018-19.</td></tr>
<tr><td>vii.</td><td>The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.</td><td>4 online AAQMS have been commissioned to monitor $PM_{10}$, $PM_{2.5}$, $SO_2$, NOx, CO, $NH_3$ continuously. All other AAQ parameters being analysed by CPCB recognized environment laboratory are also found within prescribed limit.<br><br>There is one mobile monitoring facility & 20 manual AAQMS located both inside the plant and also outside the plant area.</td></tr>
<tr><td>viii.</td><td>In-plant control measures for checking fugitive emissions from all the vulnerable sources including bag filters and fume extraction system shall be provided. Dry fog dust suppression system / water sprinkling system shall be provided in raw material handling areas to</td><td>Sign board have been placed on all the critical areas to keep the speed of the vehicle within 35 kmph to control secondary emission along the internal road (VIP Road) and similarly the vehicle speed is limited to 16 kmph in the units</td></tr>
</table>

| | | |
|---|---|---|
| | control fugitive dust emissions. Fugitive emissions from different sources shall also be controlled by covered conveyors, water sprinkling in open yards and with dry fogging in the closed zones. Further, specific measures like asphalting of the roads within premises shall be carried out to control fugitive emissions. Fugitive emissions shall be controlled, regularly monitored and records maintained. | |
| ix. | Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. New standards issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 shall be followed. | Secondary dust emission inside the plant in different critical areas is being monitored in about 350 locations monthly. The average level of PM during the period April 2014 to March 2015 is 5.7 mg/$m^3$. |
| x. | As proposed, traffic decongestion plan shall be implemented in a time bound manner to reduce emissions in the Jamshedpur city and separate budget shall be allocated for implementing the same. Maximum inbound and out bound material movement shall be done by railway wagons only to reduce dust emissions. Measures like covered conveyors for handling of bulk materials, centralized screening of iron ore, rationalization of weighing system, use of higher capacity vehicles etc. shall be adopted to reduce dust emissions. Mechanized vacuum cleaning of arterial roads shall be carried out on regular basis to further reduce dust emissions. | Sign board have been placed on all the critical areas to keep the speed of the vehicle within 35 kmph to control secondary emission along the internal road (VIP Road) and similarly the vehicle speed is limited to 16 kmph in the units. All the loaded trucks/dumpers coming inside the plant about their valid PUC. Inside the plant automatic traffic control system is in place to control the traffic density as well as the safely including secondary emission inside the plant.<br><br>All the loaded trucks are ensured to be covered with tarpaulin sheets to avoid dust getting air borne and thus generation of secondary emission |

| | | |
|---|---|---|
| xi. | Vehicular pollution due to transportation of raw materials and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during loading and unloading of the raw material and finished product. | Sign board have been placed on all the critical areas to keep the speed of the vehicle within 35 kmph to control secondary emission along the internal road (VIP Road) and similarly the vehicle speed is limited to 16 kmph in the units. All the loaded trucks/dumpers coming inside the plant about their valid PUC. Inside the plant automatic traffic control system is in place to control the traffic density as well as the safely including secondary emission inside the plant.<br><br>All the loaded trucks are ensured to be covered with tarpaulin sheets to avoid dust getting air borne and thus generation of secondary emission |
| xii. | As proposed, total water requirement from River Subarnarekha shall not exceed 33.3 MGD although permission for 227 MGD water is obtained vide letter dated 7th January, 1992. Closed circuit cooling system shall be provided to reduce further water consumption. All the wastewater from various units shall be treated in the common effluent treatment plant (CETP) for primary, secondary and tertiary treatment shall be either recycled or used for dust suppression, slag quenching and green belt development etc. within the lease hold area. The phenolic effluent from the by-product recovery section of coke oven battery # 10 and 11 shall be treated in BOD plant. Wastewater containing suspended solids shall be passed through clarifloculation plant to recover and reuse the clarified water for cooling or cleaning. Mill effluent containing oil and suspended solids shall be passed through oil skimmers and filter press. No treated wastewater shall be released out the premises and 'Zero' discharge shall be adopted by recycling all the treated water in the plant itself including from the existing plant. | Due to water recycling facilities the total water requirement from River Subarnarekha shall not cross 33.3 MGD for Steel Works. Closed circuit cooling systems have been installed. CETP is being constructed to treat and recycle most of the effluent by tertiary treatment. The existing BOD plant is under expansion to treat the additional effluent generated from Coke Oven Battery 10 & 11. Catch pits have been constructed to recycle the treated effluent within plant.<br>The action plan for recycling of effluent and Central Effluent Treatment Plant are being implemented. The unit had submitted the same vide letter no. EMD/C-33/124/13 dated June 22, 2013. |
| xiii. | Efforts shall be made to | Rain Water Harvesting structure of 38 Nos. have been |

| | | |
|---|---|---|
| | make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources. | provided inside the plant area of which some area has the facility of Ground Water Recharge system. RWH structure has been constructed based on the maximum rainfall of last 20 yrs. |
| xiv. | Continuous monitoring of Total Organic Compounds (TOC) in the wastewater treated in BOD plant from the coke oven plant shall be done at the outlet of ETP (BOD plant). All the treated wastewater shall be monitored for pH, BOD, COD, oil & grease, cyanide, phenolic compounds, Chromium+6 etc. besides other relevant parameters. | The BOD plant has facility of continuous monitoring of TOC. Similarly monitoring of other parameters on the outlet of the BOD plant is being done regularly. The monthly monitoring data is being submitted to JSPCB and six monthly reports are being submitted to MoEF and CPCB. |
| xv. | Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the E(P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhubaneswar, Jharkhand SPCB and CPCB. | All the effluent viz. catch pits, service water etc are being monitored regularly. The treated effluents such as all ETP outlets and drains are being analyzed regularly. Water quality of Subarnarekha and kharkai is also being monitored as a part of regular monitoring of surface water quality. There are two cooling water pond whose water quality is also regularly monitored as part of sub surface water quality. Ground water quality is also being monitored at 7 locations both inside and outside plant premises. The monthly monitoring data is being submitted to JSPCB and six monthly reports are being submitted to MoEF and CPCB. |
| xvi. | 'Zero' effluent discharge shall be strictly followed and no additional wastewater shall be discharged outside the premises. Domestic wastewater shall be treated in septic tanks followed by soak pit and used for green belt development. | As per the water balance and plan of zero effluent discharge, all the plant effluent is being recycled in to different process units for various uses. The rain water which is being discharged into the nearby nallah is being collected and in low lying area and settled water is let out thereafter. Maximum effort is being taken to minimize the discharge of rain water. |
| xvii. | As proposed, the water consumption shall not exceed 5.7 $m^3$/Ton of steel at 9.7 MTPHY stage. | The specific water consumption has been reduced to 5.54 $m^3$/tcs for the year 2014-15 as compared to 5.92 $m^3$/tcs for the year 2012-13. |

| Year | Specific Water Consumption ($m^3$/tcs) |
|---|---|
| 2012-13 | 5.92 |
| 2013-14 | 5.58 |
| 2014-15 | 5.54 |

| | | |
|---|---|---|
| xviii. | All the blast furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization in cement making as per the MoUs signed with various companies including M/s Lafarge, M/s Eco-cement & M/s ACC. LD slag after metal recovery shall be used in sinter plant, blast furnaces and LD convertor, aggregates making, road ballast making, soil conditioning etc. All the flue dust generated shall be recycled within the plant to the maximum extent. Mill scales, LD sludge, lime fines and flue dust shall be recycled back to the sinter plant. The BF gas cleaning plant sludge shall be used for manufacturing briquettes. | Online slag granulation facilities have been planned in the new Blast Furnaces. All the BF Slag shall be granulated and made available to the Cement plants for cement making.<br>Additional initiatives undertaken for improving the utilization of LD Slag:<br>• Co-processing of LD Slag at Cement Kilns.<br>• Use of LD Slag as soil conditioner.<br>• Collaboration with expert external agency for processing and subsequent use of LD Slag as aggregates and ballast. |
| xix. | As proposed, coal tar sludge and BOD sludge shall be recycled for coke making by mixing with the coal charge and used in the coke ovens. Chromium sludge shall be disposed in a HDPE lined secured landfill as per the CPCB guidelines within the complex. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner. Oily waste and spent oil shall be provided to authorized recyclers/reprocessors. | All kind of process wastes are being reutilised in sinter plant. Other hazardous wastes are being handled and disposed as per the requirement under Hazardous Waste (Management, Handling and Trans-boundary movement) Rules, 2008. The details of solid waste generated and utilised during the year 2014-15is enclosed. |
| xx. | All the slag shall be used for land filling inside the plant or used as building material only after passing through Toxic Chemical Leachability Potential (TCLP) test. Toxic Chromium sludge and other hazardous substances recovered from the slag and output waste shall be disposed off in secured landfill as per CPCB guidelines. | LD Slag is being used for road making. The TCLP test conducted in 2013-14 by M/s SGS, Kolkata indicates that presence of heavy metals are present in traces in the solid waste. Their leachate potential of all Heavy metals is very negligible |
| xxi. | As proposed, Jugsalai muck | The reclamation of JMD has been completed. The |

<table>
<tr><td></td><td>dump (JMD) shall be reclaimed in a time bound manner by covering the dump site with geo-netting and vegetation alongwith localized water harvesting.</td><td>project has also constructed an RWH facility at the top of the dump which is also being utilized for development of greenery. Besides the project has also facility to pump surface drainage carry out from the plant to JMD area for development of greenery.<br>This facility has also been created to avoid letting out any surface water from the plant into the river kharkai. There is service road on the top of the JMD which had been constructed as a part of reclamation of JMD.</td></tr>
<tr><td>xxii.</td><td>A time bound action plan shall be submitted to reduce solid waste, its proper utilization and disposal to the Ministry's Regional Office at Bhubaneswar, Jharkhand SPCB and CPCB.</td><td>An action plan for Solid waste management has been submitted to JSPCB vides our letter no. EMD/C-02/460/11 dated December 16, 2011. We had also submitted road map regarding future generation and the disposal of solid waste vide our letter no. EMD/C-33/124/13 dated June 22, 2013.<br>We have taken a number of steps to improve the solid waste utilization. For the period during April 2014 to March 2015, the solid waste utilization was 78% excluding storage of LD slag at Galudih for processing. Various actions have been already planned to improve the solid waste utilization further.</td></tr>
<tr><td>xxiii.</td><td>Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of solid/hazardous waste shall be submitted to the Ministry's Regional Office at Bhubaneswar, Jharkhand SPCB and CPCB.</td><td>Most of the solid waste is being reutilized. Information regarding solid waste and hazardous waste is being submitted in Environment Statement to the Board every year.</td></tr>
<tr><td>xxiv.</td><td>Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003. All the fly ash shall be provided to cement and brick manufacturers for further utilization and 'Memorandum of Understanding' shall be submitted to the Ministry's Regional Office at Bhubaneswar.</td><td>The quantity of generation of fly ash for last three years is as follows:
<table>
<tr><th>Sl No.</th><th>Year</th><th>Quantity generated in tonnes</th><th>Quantity utilized</th></tr>
<tr><td>1</td><td>2012-13</td><td>31,246</td><td>Disposed in ash pond through HCSD system</td></tr>
<tr><td>2.</td><td>2013-14</td><td>20,951</td><td>Disposed in ash pond through HCSD system</td></tr>
<tr><td>3</td><td>2014-15</td><td>22,474</td><td>Disposed in ash pond through HCSD system</td></tr>
</table>
All the boilers are now have been converted from coal fired to gas fired. Thus there is no additional generation of fly ash in the power plant.</td></tr>
<tr><td>xxv.</td><td>A Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the</td><td>Disaster Management Institute, Bhopal has verified and certified the Risk assessment report and Disaster Management Plan vide their letter no. DMI/IDMU/Con-227/24 dated April 16, 2012. The same has been submitted to JSPCB.</td></tr>
</table>

| | | |
|---|---|---|
| | Ministry's Regional Office at Bhubaneswar, Jharkhand SPCB and CPCB within 3 months of issue of environment clearance letter. | |
| xxvi. | As proposed, green belt shall be developed in more than 33 % area within and around the plant premises as per the CPCB guidelines in consultation with DFO. | We have planted approx. 28,576 saplings during April 2014 to March 2015 inside the works and Jugsalai Muck Dump area and in Township. Every year plantation done in available space. |
| xxvii. | Prior permission from the State Forest Department shall be taken regarding likely impact of the expansion of the proposed steel plant on the reserve forests. Measures shall be taken to prevent impact of particulate emissions / fugitive emissions, if any from the proposed plant on the surrounding reserve forests viz. Jora Pahar PF, Sand Pcha Rahar PF, Deluse RF located within 10 km radius of the project. Further, Conservation Plan for the conservation of wild fauna in consultation with the State Forest Department shall be prepared and implemented. | Prior Permission from State Forest Department has been obtained vide their memo. No. 2605 dated October 29, 2010.<br>Wildlife Conservation Plan has been submitted to PCCF, Jharkhand vide our letter no. EMD/C-33/368/11 dated October 07, 2011 |
| xviii. | All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants shall be implemented | CREP recommendations have been implemented. |
| xxix. | All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 18th June, 2009 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhubaneswar. | All the commitments made to the public during the Public Hearing are being implemented. |
| xxx. | At least 5 % of the total cost of the project *i.e.* ₹ 750.00 Crores shall be earmarked towards the corporate social responsibility and item-wise details along with time bound action plan shall be | It is being complied. Approx. ₹ 208 Crores has been spent on different environment upgradation project and other initiatives during the year 2014-15. |

<table>
<tr><td></td><td>prepared and submitted to the Ministry's Regional Office at Bhubaneswar. Implementation of such program shall be ensured accordingly in a time bound manner.</td><td></td></tr>
<tr><td>xxxi.</td><td>The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.</td><td>As the project is already commissioned. Compliance to this condition is not applicable.</td></tr>
<tr><td colspan="3">General Conditions:</td></tr>
<tr><td>i.</td><td>The project authorities must strictly adhere to the stipulations made by the Jharkhand Pollution Control Board (JSPCB) and the State Government.</td><td>We are regularly obtaining the CTO and authorization under Hazardous Waste.</td></tr>
<tr><td>ii.</td><td>No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment and Forests.</td><td>The Project informed that there shall be prior permission obtained for the concerned authorities in case of any medications, augmentation, and product mix change. The detail of production of various products for last three years is as follows:
<table>
<tr><th>Sl No</th><th>Product</th><th>Unit</th><th>Capacity granted in EC</th><th>2012-13</th><th>2013-14</th><th>2014-15</th></tr>
<tr><td>1</td><td>Hot Metal</td><td>'000 tonnes</td><td>10550</td><td>8858</td><td>9899</td><td>10135</td></tr>
<tr><td>2</td><td>Crude Steel</td><td>'000 tonnes</td><td>9700</td><td>8130</td><td>9155</td><td>9331</td></tr>
<tr><td>3</td><td>Saleable Steel</td><td>'000 tonnes</td><td>9440</td><td>7941</td><td>8931</td><td>9072</td></tr>
<tr><td>4</td><td>Captive Power</td><td>MW</td><td>-</td><td>120.64</td><td>132.24</td><td>112.06</td></tr>
</table></td></tr>
<tr><td>iii.</td><td>The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The state Board may specify more stringent standards for the relevant</td><td>There is a proposal to upgrade all the ESP of Sinter Plant (SP), F& G Blast Furnace & LD1 & LD2 steel melting shops. Among these 5 ESP i.e. 1 of SP1, 1 of SP2, 3 of SP3 have already been upgraded by the agency. The agreed emission for their upgraded emission has been guaranteed to be 50 mg/Nm$^3$ with an efficiency of 99.9%.<br><br>ESPs have been provided in pellet plant (Hood Stack, Wind Box Stack and Central dedusting stack) and bag</td></tr>
</table>

| | | |
|---|---|---|
| | parameters keeping in view the nature of the industry and its size and location. | filters in other areas where dedusting as the main criteria<br><br>Bag Filters are provided in the Cast House and Stock House of H and I Blast Furnace each. As explained as above, 3 bag filters have been provided in the pellet plant to control waste gas from the drying and grinding unit of pellet plant. |
| iv. | 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, $SO_2$ and NOx are anticipated in consultation with the Jharkhand PCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Bhubaneswar and the Jharkhand PCB/CPCB once in six months. | 4 online AAQMS have been commissioned to monitor PM10, PM2.5, SO2, NOx, CO, NH3 continuously inside the Works. There is one mobile monitoring facility & 20 manual AAQMS located both inside the plant and also outside the plant area. Monitoring report is being submitted to JSPCB, CPCB and Regional Office.<br><br>The monitoring data for the period April 2014 to March 2015 indicates that all the parameters are within the prescribed limit of NAAQS. PAHs, Lead and Ammonia are being done by CPCB recognized environment laboratory. |
| v. | Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose. | Surface and ground water monitoring at various locations are being done and analysis reports also being sent to RO, MoEF and JSPCB. |
| vi. | 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). | The project is providing precautions to all the workers/officers to avoid any accompanied noise hazards. Facilities like silencers, enclosers, hood etc have been provided to reduce noise at source. The monitored data in the work zone reveals that the noise level does not exceeds >85 dBA for 8 hr exposures. Similarly in the ambient also, the noise levels meet the prescribed standards. |
| vii. | Occupational Health Surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act. | Regular health surveillance is being conducted i.e. 2 times in a year to all the workers who have already attended more than 40 yrs of age. The workers having age less than 40 yrs are under gone occupational health surveillance program once in a year. |
| viii. | The company shall develop surface as well as ground | Rain Water Harvesting structure of 38 Nos. has been provided inside the plant area of which some area has |

| | | |
|---|---|---|
| | water harvesting structures to harvest the rainwater for utilization in the lean season besides recharging the ground water table. | the facility of Ground Water Recharge system. RWH structures have been constructed based on the maximum rainfall of last 20 yrs. |
| ix. | 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. | Socio economic development activities are regularly undertaken in and around Jamshedpur through the two agencies namely, Tata Steel Rural Development Society and Tata Steel Community Development & Welfare Services Centers. The development activities undertaken in the surrounding community are need based and are in the field of health care, education, mid-day meals in schools, sports and culture, self-employment, drinking water, rural electrification, etc. Tata Steel also facilitate the Institutes like R D Tata Technical Institute, Tata Football Academy, Tata Archery Foundation, etc. which encourages the local talent to develop themselves and participate at National and International levels. |
| x. | As proposed, ₹ 2,107.00 Crores and ₹ 60.00 Crores shall be earmarked towards total capital cost and recurring cost/annum for environmental pollution control measures and judiciously utilized to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose. | The funds for capital investment on pollution control equipment are not diverted. More than ₹ 700 Crores has been invested in the pollution abatement measures including commissioning of new and upgradation of existing pollution control equipment. |
| xi. | The Regional Office of this Ministry at Bhubaneswar/CPCB/Jharkhand SPCB will monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly. | Six monthly compliance reports and the monitored data are being submitted regularly |
| xii. | The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the JSPCB and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.nic.in. This shall be advertised within | The Notice has been advertised in two local newspapers viz. Hindustan (Hindi) and Hindustan Times (English) on May 18, 2010 and communication to this effect was also sent to the MoEF vide our letter no. EMD/C-33/128/10 dated June 15, 2010. |

| | | |
|---|---|---|
| | 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. | |
| xiii. | A copy of Clearance letter shall be sent by proponent to concerned Panchayat, Zila Parishad/Municipal Corporation/Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent. | The copy of Clearance letter has been sent to Zila Parishad, DIC, Local Body and all concerned vide EMD/C-33/129-137/10 dated June 15, 2010. |
| xiv. | The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, the respective Zonal Office of CPCB and the JPCB. The criteria pollutant levels namely; SPM, RSPM, $SO_2$, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain. | Six monthly compliance reports and the monitored data are being submitted regularly. The ambient air quality parameters are being monitored and displayed at the main gate of the company in the public domain. |
| xv. | The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e- | Six monthly compliance reports are being submitted regularly both in hard copy and by e-mail. |

| | | |
|---|---|---|
| | mail) to the Regional Office of MOEF at Bhubaneswar, the respective Zonal Office of CPCB and the JSPCB. The Regional Office of this Ministry at Bangalore / CPCB / JPCB shall monitor the stipulated conditions. | |
| xvi. | The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail. | The environmental statement for each financial year in Form-V is regularly being submitted to the Jharkhand State Pollution Control Board. |
| xvii. | Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work. | It has been complied. |