

**Agenda Items for the 54<sup>th</sup> Goa-State Environment Impact Assessment Authority (Goa-SEIAA) meeting held on 18<sup>th</sup> May 2020 (Monday) at 11am at GCZMA office , Pundalik Nagar, Porvorim, Goa.**

1. **The Goa-SEAC has received application from six steel industries located in Goa for enhancement of production capacities on 18/04/2018 details of which are as follows:**

Sr.No.	Steel Industries	Existing production capacity in TPA	Proposed capacity enhancement in TPA	Total production capacity after expansion in TPA
1	<b>M/s. Global Ispat Ltd.,</b> Plot no. . M-18 and M-19, Cuncolim Industrial Estate	42000	17000	59000
2	<b>M/s.Goa Ispat Ltd.</b> Plot no. E-6, Madkaim Industrial Estate	21600	37900	59500
3	<b>M/s.MohitIspat Ltd.</b> Plot no. M-14 to M16, Cuncolim Industrial Estate	30000	28000	58000
4	<b>M/s.ShraddhaIspat Ltd.</b> Plot no. M-1, Cuncolim Industrial Estate	45000	14500	59500
5	<b>M/s.ShriBalajiRollings Ltd.</b> Plot no. M-14 to M16, Cuncolim Industrial Estate	31960	26040	58000
6	<b>M/s.Mandovi Steel Industries Pvt. Ltd.</b> Kundaim Industrial Estate	30000	29500	59500
	<b>Total</b>	<b>200560</b>	<b>152940</b>	<b>353500</b>

TPA: Tonnes per annum

The above referred industries propose to achieve the capacity enhancement by replacing the existing induction furnaces by higher capacity furnaces details of each are as follows.

Sr.No	Steel Industries	Existing equipments	Additional/ Proposed equipments
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1	Global Ispat Ltd.	8T X 1 no. IF 5T X 1 no. IF	8T X 1 no. (replacing 5T IF with 8T IF)
2	Goa Ispat Ltd.	7T X 1 no. IF 3.5T X 1 no. IF	8T X 1 no. (replacing 5T IF with 8T IF)
3	MohitIspat Ltd.	15T X 2 nos. IF	--
4	ShraddhaIspat Ltd.	12T X 2 nos. IF	12T X 2 nos. IF
5	ShriBalajiRollings Ltd.	5T X 1 no. IF	12T X 1 no. IF (replacing 5T IF)  Online hot rolling mill
6	Mandovi Steel Industries Pvt. Ltd.	7T X 1 no. IF	10T X 1 no. IF (replacing 7T IF)

IF: Induction Furnace

The industries also propose to install following additional equipments

Sr.No	Steel Industries	Existing equipments	Additional/ Proposed equipments
1	Global Ispat Ltd.	CCM Online hot rolling mill	--
2	Goa Ispat Ltd.	CCM Online hot rolling mill	--
3	MohitIspat Ltd.	CCM Online hot rolling mill	--
4	ShraddhaIspat Ltd.	CCM Online hot rolling mill	--
5	ShriBalajiRollings Ltd.	CCM	Online hot rolling mill
6	Mandovi Steel Industries Pvt. Ltd.	CCM	--

CCM: Continuous Casting Machine

With respect to control of air pollution, all the respective industries have installed wet venturi-scrubber followed by a stack of height 30 mtrs. The capacities of these Air Pollution Control Devices were found adequate to treat flue gases from Induction furnaces. The capacity enhancement proposal by industries proposes to modify design of suction hood connected to the Induction Furnaces to get better efficiency in suction of flue gases from furnace mouth. Top mounted suction hood will be replaced with side mounted suction hood. Increase in capacity of settling ponds of venturi scrubber is proposed.

Water demand is as follows

Sr.No.	Steel Industries	Existing water demand KLD	Proposed water demand KLD	Total water demand KLD
1	Global Ispat Ltd.	111.7	98.47	210.17
2	Goa Ispat Ltd.	60.95	106.95	167.9
3	MohitIspat Ltd.	111.71	32.7	144.41
4	ShraddhaIspat Ltd.	101.47	32.7	134.17
5	ShriBalajiRollings Ltd.	98.47	79.75	178.22
6	Mandovi Steel Industries Pvt. Ltd.	95.42	35.2	130.62

Solid waste generation and management plan is as below

Sr.No.	Name of the industries applied for Env. Clearance for proposed expansion	Solid waste (non-hazardous waste)				Disposal
		Type	Existing MT/month	Proposed MT/month	Total MT/month	
1	Global Ispat Ltd.	Slag	560	180	740	Slag - Crushed and separated into magnetic and non-magnetic slag. Magnetic is reused in induction furnace. Nonmagnetic is sold for brick manufacturing  Mill scale - Recycled to primary steel industry
		Mill scale	69	28	97	
2	Goa Ispat Ltd.	Slag	300	280	580	
		Mill scale	36	61	97	
3	MohitIspat Ltd.	Slag	341	303	644	
		Mill scale	42	65	107	
4	ShraddhaIspat Ltd.	Slag	600	157	757	
		Mill scale	36	24	60	
5	ShriBalajiRollings Ltd.	Slag	350	377	727	
		Mill scale	53	43	96	
6	Mandovi Steel Industries Pvt. Ltd.	Slag	334	286	620	
		Mill scale	36	57	93	

The only hazardous waste from these industries is used oil from operation of D.G sets. With expansion no additional hazardous waste is proposed to be generated.

In all there were 25 numbers of steel industries in operations in the state of Goa with total production capacity of 821940 TPA. Of these 25 steel industries, presently only 15 numbers are in operations with capacity of 503840 TPA. Upon capacity enhancement of above referred steel industries, the total capacity of production from induction furnace in Goa will be to 656780 TPA.

The proposed capacity enhancement entails improvement in efficiency of Induction Furnaces. Thus following environmental benefits can be enlisted from the projects

1. Online/Direct hot rolling mill will replace use of re-heating furnace. Re-heating furnace consumes coal as fuel. About 100~120 Kg of coal is required per ton of metal for re-heating furnace. MS billets will be now being directly fed to hot rolling mill therefore eliminating use of coal completely. Transportation of billets to re-heating furnace will not be required. Thus saving the fossil fuels required for transportation also.
2. New Induction furnaces are energy efficient compared to current furnaces. A typical energy consumption of 7T IF is 800 units/ton of steel. A 10 T new energy efficient IF proposed for installation will have energy consumption of 720 units/ton of steel.
3. With installation of continuous casting machines solid waste generated in form of refractory materials has been reduced by the industries.

The committee conducted the site inspections of all the sites on 17/11/2018; 11/01/2020 05/02/2020, followed with project specific presentation by Earthwood Services Pvt. Ltd, Gurgram (NABET/EIA consultant). Committee appraised all the above proposals as schedule 3 (a) Metallurgical process (Ferrous and non-Ferrous) as per EIA Notification 2006 **Category 'B2'** as per OM No. J-13012/12/2013- IA-II (I) dated 24<sup>th</sup> December 2013 during its 100<sup>th</sup> meeting held on 21<sup>st</sup> December 2028 and sought compliances which were submitted by the project proponent, the Committee during its 118<sup>th</sup> meeting decided to recommend the above projects to Goa-SEIAA for grant of environmental clearance under the provision of EIA Notification 2006 subject to following conditions:

1. Safety officer should conduct training which will be monitored by the company.
2. Care should be taken during tilting of crucible.
3. Project proponent has to develop green belt area around the plot, develop urban Forest and carbon neutral activity as a corporate environmental responsibility.
4. PP has to propose metallic dust control measures.
5. With capacity enhancement, new modification with respect to operation of Induction Furnaces shall be carried out. New modification shall ensure automated PLC based system which should trip upon un-usual functioning and automatically trigger the alert alarm.

6. Light scrap be bundled and fed into furnace using electromagnets. Thus reducing the human exposure to one of the hazardous operation.
7. Overhead cranes shall be used for transfer of molten metal from to furnace to CCM.
8. De-slagging should be done by tilting the furnace. Human exposure should be eliminated.
9. Charging of raw material to the furnace shall be through conveyor system.
10. A dedicated safety officer shall be appointed. Safety officer shall be responsible for carrying out training and awareness programs of all the employees. Records of such awareness shall be submitted periodically through six monthly compliance report.
11. Regular training of safety officer shall be carried out through agencies like Inspectorate of factories and boilers.
12. Documentary evidences of training and awareness programs conducted at the site shall be documented and submitted with six monthly compliances.
13. Occupational health surveillance of the workers shall be done on regular basis and records shall be maintained as per Factories Act. Records of health check-ups shall be submitted along with six monthly compliance reports.
14. Occurrence of any accidents shall be also forwarded along with six monthly compliance reports.
15. No additional land shall be used /acquired for any activity of the project without obtaining proper permission.
16. Project proponent shall achieve Zero Liquid Discharge.
17. In the event of the failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.
18. A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water. Report on implementation of rain water harvesting system shall be submitted with compliance report.
19. Periodic monitoring of ground water shall be undertaken and results analysed to ascertain any change in the quality of water. These reports shall be submitted to Goa State Pollution Control Board.
20. Noise level shall be maintained as per standards. For people working in the high noise area, requisite personal protective equipment like earplugs etc. shall be provided.
21. Green belt shall be developed & maintained around the plant periphery. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the forest department of Goa.
22. Regular mock drills for the on-site emergency management plan shall be carried out. Implementation of changes / improvements required, if any, in the on-site management plan shall be ensured.
23. Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Goa State Pollution Control Board & this department.

24. The proponent shall upload the status of compliance of the stipulated EC 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 MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
  25. Project proponent shall ensure asphaltting of internal roads to prevent air pollutions from transportation.
  26. A good housekeeping shall be maintained.
  27. Under Corporate Environmental Responsibility industries shall collectively or individually in consultation with appropriate authority shall maintain a dedicated greenbelt area in industrial estate. Native indigenous tree species shall be preferred for plantation in this greenbelt area.
  28. Efficiency report of Air Pollution Control Device upon commissioning of new induction furnaces or upon expansion in production capacities shall be submitted to Goa State Pollution Control Board and this office upon expansion of production capacity.
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2. To decide on applications received for extension of EC validity of minor mineral quarry proposals.
  3. Any other matter with a permission of the Chair.

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