

INTEGRATED IRON & STEEL PLANTS:

Sr. No.	Industry	Parameter	Standards
1	2	3	4
² 12.	COKE OVENS		Concentration in the effluents when discharged into inland surface waters not be exceed milligramme per litre (except for pH)
		pH	5.5 – 9.0
		Biochemical Oxygen Demand (27°C for 3 days)	30
		Suspended Solids	100
		Phenolic Compounds (as C ₆ H ₅ OH)	5
		Cynides (as CN)	0.2
		Oil & Grease	10
		Ammonical Nitrogen (as N)	50
24.	IRON & STEEL (INTEGRATED)	Particulate Matter Emission	
		- Sintering Plant	150 milligramme per normal cubic metre
		- Steel making	
		-- during normal operations	150 milligramme per normal cubic metre.
		--during oxygen lancing	400 milligramme per normal cubic metre.
		- Rolling Mill	150 milligramme per normal cubic metre.
		- Carbon monoxide from coke oven	3 kilogramme per tonne of coke produced.

30.	INTEGRATED IRON AND STEEL PLANTS:	I. EMISSIONS	
	(a) Coke Oven	Particulate mater	50
	(b) Refractory material plant	Particulate matter	150
		II. EFFLUENTS	Concentration in mg/l except for pH.
	(a) Coke oven		
	By product plant.	pH	6.0 – 8.0
		Suspended Solids	100
		Phenol	1.0
		Cynide	0.2
		BOD ¹ [(3 days at 27°C)]	30
		COD	250
		Ammonical Nitrogen	50
		Oil and Grease	10
	(b)Other plants such as sintering plant, blast furnace, steel melting and rolling mill:		
		pH	6.0 – 9.0
		Suspended Solids	100
		Oil and Grease	10

Sl. No.	Industry	Parameter	Standard		
			New Batteries (at Green Field Site)	Rebuild Batteries	Existing Batteries
Fugitive Visible Emissions					
1279	COKE OVEN PLANTS (by product recovery type)	(a) Leakage from door	5(PLD)*	10(PLD)*	10(PLD)*
		(b) Leakage from charging lids	1(PLL)*	1(PLL)*	1 (PLL)*
		(c) Leakage from AP Covers	4(PLO)*	4(PLO)*	4(PLO)*
		(d) Charging emission (Second/charge)	16(with HPLA)*	50 (with HPLA)*	75
Stack Emission of Coke Oven					
	(a) SO ₂ (mg/Nm ³)		800	800	800
	(b) NO _x (mg/ Nm ³)		500	500	500
	(c) SPM,(mg/Nm ³)		50	50	50
	(d) SPM emission during charging – for stamp charging batteries (stack emission) mg/Nm ³		25	25	25
	(e) SPM emission during coke pushing (stack emission) gm/ton of coke		5	5	-
	(f) Sulphur in Coke Oven gas used for heating (mg/Nm ³)		800	-	-
Emission for quenching operation					
	(a) Particulate matter gm/tonne of coke produced		50	50	-
Benzo-Pyrene (BaP) concentration in work zone air (µg/m³)					
	(a) Battery area (top of the battery)		5	5	5
	(b) Other units in coke oven plant		2	2	2
	(c) Ambient standards (mg/Nm ³)		10	10	10

For control of emissions and to maintain environmental quality in work zone area, the following guidelines shall be followed, namely:-

- (i) New coke oven units shall follow any of the low-emission procedures, such as, coke dry cooling, non-recovery coke-ovens. Indirect Quenching Process, Jumbo coke oven reactor, Modified Wet Quenching System with appropriate environmental controls (e.g. baffles, filtering media, collection and treatment of residual water from quench tower and recycling; Use of process water as quenching water shall not be permissible).
- (ii) Effective pollution control measures (for e.g. Extensive maintenance and cleaning of oven doors and frame seals, ascension pipes, charging holes and lids and other equipment; On-main charging system(HPLA); Luting charging holes with clay-suspension; Modified guide/transfer car with emission control system etc. shall be used to reduce coal charging and coke pushing emissions.
- (iii) During rebuilding or installing new coke oven batteries, the following clean technology and pollution control measures be adopted:
 - (a) air-cooled self-sealing doors;
 - (b) the hydro-jet cleaning system shall be provided for the door and door frame cleaning with a facility of hydro jet pressure of 600 kg/cm²;
 - (c) the charging should be accomplished with hermetically sealed charging sleeves and screw feeder in charging car. The charging car should also be equipped with magnetic lid lifter and lid and frame cleaning mechanism (applicable to top charging batteries);
 - (d) to provide aspiration through high-pressure ammonia liquor (HPLA) injection in goose neck and emission should be transferred directly to gas collecting mains;
 - (e) water sealed AP covers should be provided;
 - (f) computerized combustion control and moisture control systems.
- (iv) In addition to the above the new coke oven batteries, which will be installed after the date of publication of this notification at green field site and rebuild batteries wherever technically feasible should also be equipped to treat their pushing emissions with stationary land-based system with collection hood and wet scrubbing units for gas cleaning.

- (v) In the case of existing coke ovens with wet quenching, the new procedures as in (i) and (ii) shall be adopted.
- (vi) The fugitive visible emission standards i.e. PLD*, PLL* and PLO*, charging emission (second/charge).

Note: Units set up after the publication of this notification shall be treated as new units.

- *HPLA - Aspiration through high pressure liquor injection in gooseneck;
- *PLD - Percent leaking doors;
- * PLL - Percent leaking lids; and
- * PLO - Percent leaking off takes].