

**MINISTRY OF ENVIRONMENT AND FORESTS
NOTIFICATION**

New Delhi, the 31st March 2012

G.S.R. 277(E)-- In exercise of the powers conferred by Sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following Rules further to amend the Environment (Protection) Rules, 1986, namely:-

1. (1) These Rules may be called the Environment (Protection) (Third Amendment) Rules, 2012.
- (2) They shall come into force on the date of their publication in the Official Gazette.
2. In the Environment (Protection) Rules, 1986, in Schedule-I,-
 - (a) (i) serial number 12 relating to "Coke Ovens" and entries relating thereto shall be omitted;
 - (ii) for serial number 24 relating to "Iron and Steel (Integrated)" and entries relating thereto, the following serial number and entries shall be substituted, namely:-

S. No.	Industry	Parameter	Standard			
(1)	(2)	(3)	(4)			
"24.	Integrated Iron and Steel Plant	A.- Coke Oven (by-product type)				
		a. Effluent Standards				
			Limiting concentration in mg/l, except for pH			
		pH	6.0-8.50			
		Suspended Solids	100			
		BOD, 3 days at 27 ⁰ C	30			
		COD	250			
		Oil and Grease	10			
		Ammonical Nitrogen, as N	50			
		Cyanide (as CN)	0.2			
		Phenol	1.0			
		b. Emission Standards				
			New Batteries (at green field site)	Rebuild Batteries	Existing Batteries	
		(i) Fugitive Visible Emissions				
		Leakage from door	5(PLD)*	10(PLD)*	10(PLD)*	
		Leakage from charging lids	1(PLL)**	1(PLL)**	1(PLL)**	
		Leakage from AP Covers	4(PLO) [†]	4(PLO) [†]	4(PLO) [†]	
		Charging emission (Second/charge)	16 (with HPLA) [#]	50 (with HPLA) [#]	75	
		*PLD – Percent Leaking Doors; **PLL – Percent Leaking Lids;				
		[†]PLO – Percent Leaking off takes and [#]HPLA - Aspiration through high pressure liquor injection in gooseneck.				
		(ii) Stack Emission Standards				
		SO ₂ (mg/Nm ³)	800	800	800	
		NO _x (mg/Nm ³)	500	500	500	
Particulate Matter (mg/Nm ³)	50	50	50			
Particulate Matter during charging of stamp charging batteries (mg/Nm ³)	25	25	25			
Sulphur in Coke Oven gas used for heating (mg/Nm ³)	800	-	-			
(1)	(2)	(3)	(4)			

		(iii) Fugitive Emissions: Benzo (a) Pyrene (BaP)		
		Battery area (top of the battery) ($\mu\text{g}/\text{m}^3$)	5	5
		Other units in Coke Oven Plant ($\mu\text{g}/\text{m}^3$)	2	2
		B.- Sintering Plant		
		a. Effluent Standards		
			Limiting concentration in mg/l, except for pH	
		pH	6.0-8.50	
		Suspended Solids	100	
		Oil and Grease	10	
		b. Emission Standards		
		Particulate Matter (mg/Nm^3)	150	
		C.- Blast Furnace		
		a. Effluent Standards		
			Limiting concentration in mg/l, except for pH	
		pH	6.0-8.5	
		Suspended Solids (mg/l)	50	
		Oil and Grease (mg/l)	10	
		Cyanide as CN (mg/l)	0.2	
		Ammonical Nitrogen as $\text{NH}_3\text{-N}$ (mg/l)	50	
		b. Emission Standards		
		(i) Stack Emissions		
			Existing Units	New Units
		BF Stove		
		Particulate Matter (mg/Nm^3)	50	30
		SO_2 (mg/Nm^3)	250	200
		NO_x (mg/Nm^3)	150	150
		CO (Vol/Vol)	1% (max.)	1% (max.)
		(ii) Space Dedusting / Other stacks of BF area		
		Particulate Matter (mg/Nm^3)	100	50
		(iii) Fugitive Emission		
			Existing Units	New Units
		Particulate Matter (Size less than 10 microns) PM_{10} ($\mu\text{g}/\text{m}^3$)	4000	3000
		SO_2 ($\mu\text{g}/\text{m}^3$)	200	150
		NO_x ($\mu\text{g}/\text{m}^3$)	150	120
		Carbon Monoxide ($\mu\text{g}/\text{m}^3$)		
		- 8 hours	5000	5000
		- 1 hours	10,000	10,000
		Lead, as Pb in fugitive dust ($\mu\text{g}/\text{m}^3$) at Cast House.	2	2
		D.- Steel Making Shop – Basic Oxygen Furnace		
		a. Effluent Standards		
		pH (mg/l)	6.0-8.5	
		Suspended Solids (mg/l)	100	
		Oil and Grease (mg/l)	10	
(1)	(2)	(3)	(4)	

<i>(i) Stack Emissions</i>		
	Existing Units	New Units
● Converters		
Particulate Matter (mg/Nm ³)		
- Blowing/Lancing operation	300	Should be with gas recovery
- Normal operation	150	Should be with gas recovery
▪ Secondary Emission Stack: De-dusting of de-sulphurisation, Secondary refining etc.		
Particulate Matter (mg/Nm ³)	100	50
<i>(ii) Fugitive Emissions</i>		
	Existing Units	New Units
Particulate Matter (size less than 10 microns) PM ₁₀ (µg/m ³)	4000	3000
SO ₂ (µg/m ³)	200	150
NO _x (µg/m ³)	150	150
CO (µg/m ³)	- 8 hours	5,000
	- 1 hours	10,000
Lead, as Pb in dust at Converter floor (µg/m ³)	2	2
E.- Rolling Mills		
a. Effluent Standards		
pH	6.0-9.0	
Suspended Solids (mg/l)	100	
Oil and Grease (mg/l)	10	
b. Emission Standards		
Particulate Matter (mg/Nm ³)	150	
Re-Heating (Reverberatory) Furnaces		
	Sensitive area	Other area
Particulate Matter (mg/Nm ³)	150	250
F.- Arc Furnaces		
Emission Standards		
Particulate Matter (mg/Nm ³)	150	
G.- Induction Furnaces		
Emission Standards		
Particulate Matter (mg/Nm ³)	150	
H.- Cupola Foundry		
Emission Standards		
	Melting capacity less than 3 tonne/hr	Melting capacity 3 tonne/hr and above
Particulate Matter (mg/Nm ³)	450	150
SO ₂ (mg/Nm ³)	300, corrected at 12% CO ₂	

(1)	(2)	(3)	(4)
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I.- Calcination Plant/ Lime Kiln/ Dolomite Kiln		
Emission Standards		
	Capacity upto 40 t/day	Capacity above 40 t/day
Particulate Matter (mg/Nm ³)	500	150
J.- Refractory Unit		
Emission Standards		
Particulate Matter (mg/Nm ³)	150	
Note:		
<ol style="list-style-type: none"> 1. The height of the each process stack shall be a minimum of 30 meters or as per the formula $H = 14 (Q)^{0.3}$ (Whichever is more), where “H” is the height of stack in meters; and “Q” is the maximum quantity of SO₂ in kg/hr expected to be emitted through the stack at rated capacity of the plant(s) and calculated as per the norms of gaseous emission. 2. The plants having separate stack for gaseous emission for the scrubbing unit, the height of this stack shall be equal to main stack of the plant or 30 meters, whichever is higher. 3. It is essential that stack constructed over the cupola beyond the charging door and emissions shall be directed through the stack which should be atleast six times the diameter of cupola. 4. In respect of Arc Furnaces and Induction Furnaces, provision shall be made for collecting the fumes before discharging the emission through the stack. 5. Foundries shall install scrubber, followed by a stack of height atleast six times the diameter of the Cupola beyond the charging door. 6. Recovery type converters shall be installed in new plants or expansion projects. 		
Stormwater		
Note:		
<ol style="list-style-type: none"> (i) Stormwater shall not be allowed to mix with effluent, scrubber water and/or floor washings. (ii) Stormwater shall be channellized through separate drains as per natural gradient, passing through High Density Polyethylene (HDPE) lined pits, each having holding capacity of 10 minutes (hourly average) of rainfall.” 		

- (iii) Serial number 30 relating to “Integrated Iron and Steel Plants” and the entries relating there to shall be omitted;
- (iv) Serial number 79 relating to “Coke Oven Plants” and the entries relating there to shall be omitted.
- (b) In Schedule VI, General Emission Standards Part D, III, Load/ Mass based standards, for serial number 5, Coke Oven and entries relating thereto, the following serial number and entries shall be inserted, namely:-

(1)	(2)	(3)	(4)
“5.	Integrated Iron and Steel Plant	Carbon Monoxide in coke oven	3 Kg/tonne of coke produced
		Particulate matter during coke pushing in coke oven	5 gramme/tonne of coke produced
		Particulate matter for quenching operation in Coke Oven	50 gramme/tonne of coke produced.”