

Amendments to Article 8 of the “Vehicular Air Pollutant Emission Standards”

Article 8 The exhaust emission standards of Carbon Monoxide (CO), Hydrocarbons (HC), Nitrogen Oxides (NO_x), and Particulate Matter (PM) for Railway vehicles and exhaust emission standards of Particulate Matter (PM) for emissions for Ships are stipulated as the following table:

Transportation Vehicle Types	Date of Implementation	Emissions Standards							Remarks
		Duty Cycle Testing						Smoke	
		Classification	CO (g/kWh)	HC (g/kWh)	NO _x (g/kWh)	HC + NO _x (g/kWh)	PM (g/kWh)	Opacity (%)	
	Date of Announcement							40	<p>1. During start duration (engine start and in acceleration process), the opacity not exceed 60% within 10 seconds is deemed as in compliance.</p> <p>2. The visual opacity of 40% is equivalent to the Ringelmann scale NO. 2.</p>
Railway Vehicles	April 27, 2017	Railcars with net power > 130 kW	3.5	0.19	2.0	-	0.025	-	<p>1. The so-called railway vehicles in this article are divided into the following two categories:</p> <p>1.1 Railcar: means a railway vehicle with motive power for propelling itself and is specifically designed to carry goods or passengers or both goods and passengers.</p> <p>1.2 Locomotive: means a railway vehicle with motive power for propelling itself and for propelling other railway vehicles, itself being designed or intended not to carry freight or passengers.</p> <p>2. The units for the Duty Cycle testing is g/(kW · h) and the test methods are as follows:</p> <p>2.1 Railcar: in accordance with the EU directive Non-Road Steady Cycle (NRSC) 8 modes duty cycle tests or the ISO 8178-4 C1 duty cycle operated on a dynamometer.</p> <p>2.2 Locomotive: in accordance with the EU directive Non-Road Steady Cycle (NRSC) 3 modes duty cycle test or the ISO 8178-4 F duty cycle operated on a dynamometer.</p>
		Locomotives with net power > 130 kW	3.5	-	-	4.0	0.025	-	<p>3. For domestic railcars and locomotives out of plant and import railcars and locomotives on-ship after April 27, 2017 shall comply with these standards; for already in-use or signed purchase contract before April 27, 2017, the original visual determination method of not to exceed 40% opacity limit is still applicable.</p> <p>4. The railcars or locomotives comply with the following provisions are deemed as in compliance with these standards:</p> <p>4.1 Being tested in accordance with the testing methods stipulated in the US CFR Part 1065 and obtained the US Tier 4 emission certificates or test report data.</p> <p>4.2 Being tested in accordance with the testing methods stipulated in the EU directive 97/68 and its subsequent amendments and obtained the Railcar or locomotive related Stage IIIB emission certificates or test report data.</p>
Ships	Date of Announcement							40	<p>1. During start duration, for ship with main propulsion power above 3000 kW and not exceed 60% opacity within 20 seconds, and for ship with main propulsion power less than 3000 kW, and not exceed 60% opacity within 10 seconds are deemed as in compliance.</p> <p>2. The visual opacity of 40% is equivalent to the Ringelmann scale NO. 2.</p>