

EU: MARINE: EMISSIONS

History

Emissions Standards for Inland Waterway Vessels

The "mother" directive of non-road engine regulation, Directive 97/68/EC, became effective in January 1999, for many specific types of nonroad engines. However, engines of inland waterway vessels weren't regulated until April 2004 under Directive 2004/26/EC. This directive defines Stage III A to cover engines from 19 to 560 kW including constant speed engines, railcars, locomotives and inland waterway vessels.

Sulphur Limits for Oceangoing Vessels

Directive 1999/32/EC regulates sulphur emissions from ships by limiting the maximum sulphur content of marine fuel. This Directive was amended by Directive 2005/33/EC that designated the Baltic Sea, the North Sea and the English Channel as sulphur emission control areas (SECAs) and limited the maximum sulphur content of the fuels used by ships operating in these sea areas to 1.5%. This fuel standard applies also to passenger ships operating on regular service outside SECAs.

Due to the international aspect of the shipping industry, environmental, security and safety standards are developed by the International Maritime Organization (IMO). Directive 1999/32/EC, as amended, includes provisions of Annex VI of IMO's Marine Pollution Convention, MARPOL 73/78. The Commission called for action at the International Maritime Organization (IMO) to further reduce emissions and in October 2008, an amended Annex VI was adopted that further reduces the maximum sulphur content of marine fuels inside and outside of SECAs. In November 2012, Directive 2012/33/EU was adopted, amending Directive 1999/32/EC. The amendment further reduces the maximum sulphur content of marine fuels inside and outside of SECAs.

Technical Standards

Engines for the Propulsion of Inland Waterway Vessels

Unlike the Stage I/II nonroad legislation, the Stage III A standards also cover engines used in inland waterway vessels. Engines are divided into categories based on the displacement (swept volume) per cylinder and net power output. The engine categories and the standards are harmonized with the US standards for marine engines. There are no Stage III B or Stage IV standards for waterway vessels.

Stage III A Standards for Inland Waterway Vessels					
Category	Displacement (D)	Date	CO	NO _x +HC	PM
	<i>dm³ per cylinder</i>		<i>g/kWh</i>		
V1:1	D ≤ 0.9, P > 37 kW	January 2007	5.0	7.5	0.40
V1:2	0.9 < D ≤ 1.2		5.0	7.2	0.30
V1:3	1.2 < D ≤ 2.5		5.0	7.2	0.20
V1:4	2.5 < D ≤ 5	January 2009	5.0	7.2	0.20
V2:1	5 < D ≤ 15		5.0	7.8	0.27
V2:2	15 < D ≤ 20, P ≤ 3300 kW		5.0	8.7	0.50
V2:3	15 < D ≤ 20, P > 3300 kW		5.0	9.8	0.50
V2:4	20 < D ≤ 25		5.0	9.8	0.50
V2:5	25 < D ≤ 30		5.0	11.0	0.50

Inland waterway vessel engines are tested using the ISO 8178-4:2002 [E] and IMO MARPOL 73/78, Annex VI (NO_x Code) tests. Emission durability period for inland waterway vessel engines is 10,000 hours.

Marine Fuel

In November 2012, European Parliament adopted Directive 2012/33/EU which requires new general limits for sulphur in marine fuels to be in place by 2020. The rules will bring European legislation in line with limits agreed by the International Maritime Organization (IMO). The general sulphur limit for fuels in European seas will fall from 3.5% to 0.5% by 2020.

Fuel used in the Baltic Sea, North Sea and English Channel — Europe's SECAs — will have to meet the IMO standard of 0.1% by 2015 (from 1% currently).

The limits can be met by using cleaner fuels or technology, such as scrubbers, that can deliver an equivalent result.

Sulphur limits inside SECAs	
Limit (%)	Date
1.50	11 August 2006
1.00	1 July 2010
0.10	1 January 2015

Sulphur limits outside SECAs	
Limit (%)	Date
3.50	1 January 2012
0.50	1 January 2020

Source: http://transportpolicy.net/index.php?title=EU:_Marine:_Emissions