



MARPOL Annex VI

Proposed Revisions from MEPC 57

Proposed changes to MARPOL Annex VI have been discussed and agreed upon at the 57th session of the IMO's Marine Environmental Protection Committee (MEPC 57). The revisions now go forward to MEPC 58 in October where it is anticipated that they will be formally adopted. To help our customers see how they will be affected by these proposed changes, Martek Marine has produced this brief outline of the sections that we feel will have the most impact upon them:

Regulation 13

Nitrogen Oxides (NO_x)

Tier II

- Ships constructed on or after 1 January 2011 have the engine's nitrogen oxides emission limit (calculated at the total weighted emission of NO₂) set within the following limits:
 - 14.4g/kWh for engine speed of less than 130 rpm
 - $44 * n^{(-0.23)}$ g/kWh for engine speed of 130 or more but less than 2000rpm
 - 7.7 g/kWh for engine speed of 2000 rpm or more

Tier III

- Ships constructed on or after 1 January 2016, while operating in Emission Control Areas have the engine's nitrogen oxides emission limit (calculated at the total weighted emission of NO₂) set within the following limits:
 - 3.4 g/kWh for engine speed of less than 130 rpm
 - $9 * n^{(-0.2)}$ g/kWh for engine speed of 130 or more but less than 2000 rpm
 - 2.0 g/kWh for engine speed of 2000 rpm or more
- Ships constructed on or after 1 January 2016, while operating outside of Emission Control Areas have the engine's nitrogen oxides emission limit (calculated at the total weighted emission of NO₂) set to the limits listed in Tier II.

Marine Diesel Engines Installed on a Ship Constructed Prior to 1 January 2000

- Marine diesel engines with a power output of more than 5,000 kW and a cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 shall comply with the below emission limits of nitrogen oxides (calculated as the total weighted emission of NO₂) no later than the first renewal survey that occurs 12 months or more after deposit of the notification:
 - 17.0 g/kWh for engine speeds of less than 130 rpm
 - 45.0*n^(-0.2) g/kWh for engine speeds of 130 or more but less than 2000 rpm
 - 9.8 g/kWh for engine speeds of 2000 rpm or more

Regulation 14

Sulphur Oxides (SO_x) and Particulate Matter (PM)

General Requirements

- The sulphur content of any fuel oil used on board ships shall not exceed the following concentrations:
 - 4.50% m/m prior to 1 January 2012;
 - 3.50% m/m on and after 1 January 2012; and
 - 0.50% m/m on and after 1 January 2020.
- The worldwide average sulphur content of residual fuel oil supplied for use on board ships shall be monitored taking into account guidelines developed by the IMO.

Requirements within Emission Control Areas

- While ships are operating within an Emission Control Area, the sulphur content of fuel oil used on board ships shall not exceed the following limitations:
 - 1.50% m/m prior to 1 March 2010;
 - 1.00% m/m on and after 1 March 2010; and
 - 0.10% m/m on and after 1 January 2015;
- Those ships using separate fuel oils and entering or leaving an Emission Control Area shall carry a written procedure showing how the fuel oil change-over is to be done, allowing sufficient time for the fuel oil service system to be fully flushed of all fuels oils exceeding the applicable sulphur content prior to entry into an Emission Control Area. The volume of low sulphur fuel oils in each tank as well as the date, time, and position of the ship when any fuel-oil-change-over operation is completed prior to the entry into an Emission Control Area or commenced after exit from such an area, shall be recorded in such log-book as prescribed by the Administration.

Review Provision

- A review shall be completed by 2018 to determine the availability of fuel oil to comply with the fuel oil standard and shall take into account the following elements:
 - The global market supply and demand for fuel oil that exist at the time that the review is conducted,
 - An analysis of the trends in fuel oil markets; and
 - Any other relevant issue.
- The IMO shall establish a group of experts, comprising of representatives with the appropriate expertise in the fuel oil market and appropriate maritime, environmental, scientific, and legal expertise, to conduct the review. The group of experts shall develop the appropriate information to inform the decision to be taken by the Parties.
- Only the Parties, based on the information developed by the group of experts, may decide whether it is possible for ships to comply with the date. If a decision is taken that it is not possible for ships to comply, then the standard in that subparagraph shall become effective on 1 January 2025.

If you would like more information on the revisions to MARPOL Annex VI and how MariNOx[®], Martek Marine's engine emissions monitoring system can help you to meet the proposed changes, email your questions to us at webenquiries@martek-marine.com or alternatively call us on +44 (0)1709 599222.

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