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- P: Equipment manufacturers, any subgroups
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Reference to: Regulations for environmental safety for ships and mobile offshore units.

Guidance on documentation that the NOx requirements in the Norwegian world heritage fjords are met

Special rules regarding emission of nitrogen oxides (NOx) from ships in the Norwegian world heritage fjords are set out in section 14c of the Regulations on environmental safety for ships and mobile offshore units.

Ships of 1,000 gross tonnage and upwards shall, irrespective of the requirements in force in the year of construction of the ship, in the world heritage fjords comply with:

- a) the Tier I requirements, cf. MARPOL regulation VI/13 by 1 January 2020;
- b) the Tier II requirements, cf. MARPOL regulation VI/13 by 1 January 2022;
- c) the Tier III requirements, cf. MARPOL regulation VI/13 by 1 January 2025.

EIAPP certificate

An EIAPP certificate (Engine International Air Pollution Prevention) is required for each marine diesel engine installed on ships constructed on or after 1 January 2000, documenting that the engine complies with the emissions requirements stipulated in MARPOL regulation VI/13. These requirements also apply in the event of a major conversion, cf. MARPOL regulation VI/13.2.

Ships constructed on or after 1 January 2000 may use their EIAPP certificates to demonstrate compliance with the NOx requirements stipulated in section 14c.

Alternative documentation based on on-board measurement of NOx emissions

An EIAPP certificate is not required for marine diesel engines installed on ships constructed prior to 1 January 2000, as the emissions requirements set out in MARPOL regulation VI/13 in principle do not apply to these engines.

Ships with marine diesel engines installed without EIAPP certificates may provide alternative documentation to demonstrate compliance with the requirements. This is done by measuring NOx emissions on board the ship. The NOx measurements shall be carried out on all engines that will be in operation during a voyage in the world heritage fjords.

The NOx measurements shall be carried out by an actor that has been accredited in accordance with NS-EN ISO/IEC 17025 using ISO 8178 as reference standard. A list of actors having notified the Norwegian Maritime Authority (NMA) that they are accredited in accordance with the above-mentioned standards is attached to this guidance circular.

The measurements must be conducted in accordance with the NOx Technical Code 2008, 6.3 “Simplified measurement method”, with the following options for simplification:

- If the specific fuel consumption is not measured on board, it may be proved by test bed data from the engine manufacturer. Such documentation must be included in the measurement report submitted to the NMA.
- If the shaft power is not measured on board, other operational parameters may be used that could provide a good estimate of power.

If the NOx measurements are conducted with the simplifications mentioned above, the specific NOx emissions at each load point shall be multiplied by a factor of 1.1 before calculating the weighted NOx emissions. This is done to take into account the uncertainty caused by the simplification of the measurement method.

For both main and auxiliary engines, the specific NOx emissions shall be documented based on the weighted values for the relevant test cycle set out in Appendix II to MARPOL Annex VI. If measurements are not taken at every load point, reasons for this must be provided in the report. Possible combinations of load points, minimum number of load points and revised weighting factors shall follow from the NOx Technical Code 2008 Appendix VIII, 6 “Selection of load points and revised weighting factors”. Combinations of load points which deviate from this or the lack of applicable load points are not allowed.

The measurement report and documentation that the actor has the necessary accreditations must be sent by the company to the NMA for approval. Where the NOx emissions comply with the NOx requirements set out in section 14c, the NMA will issue a confirmation of this to the ship.

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Actors who have notified the Norwegian Maritime Authority of having the necessary accreditations

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