

Statement of Compliance

This is to confirm that the undernoted product has been tested in accordance with the relevant requirements of NO_x Technical Code 2008 "Technical Code on control of emission of nitrogen oxides from marine diesel engines" in respect of emission testing.

Marine Emission Sensor Danfoss IXA MES1001 MARPOL

Company Danfoss IXA A/S
Marsvej 5
DK-6000 Kolding
Denmark

Product Description: Marine Emission Sensor

Type **Danfoss IXA MES1001 MARPOL**
The Danfoss IXA MES1001 MARPOL is an in situ marine CEMS for measuring NO_x (NO₂+NO), SO₂ and NH₃ from diesel engines used on maritime vessels.

This is to Confirm: The "MES1001 MARPOL" is found to be suitable as a NO_x measurement device to comply with the requirements of NTC 2008 and meets the following requirements:

- Accuracy (NTC 2008, Appendix III, Ch. 1.6)
- Precision (NTC 2008, Appendix III, Ch. 1.7)
- Noise (NTC 2008, Appendix III, Ch. 1.8)
- Zero and span drift (NTC 2008, Appendix III, Ch. 1.9 and Ch. 1.10)
- Calibration curve (NTC 2008, Appendix IV, Ch. 5.5.1)
- Interference effect (NTC 2008, Appendix IV, Ch. 9)
- The equivalence of the alternative sensors for NO_x (NO + NO₂) have been demonstrated under surveillance and to the satisfaction of DNV in accordance with paragraph 5.4.2 of the NTC 2008 and ISO 8178-1:2006, Annex D.

The "MES1001 MARPOL" shall be installed, calibrated and operated in compliance with the manufacturer's instructions and in accordance with the requirements and intervals as specified in Revised MARPOL Annex VI and NTC 2008.

Technical Data:

Component	Sensor type	Range
NO ₂	UV DOAS	0 - 500 ppm
NO	UV DOAS	0 - 1500 ppm
NO _x	calculated	0 - 2000 ppm



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This is to Note

1. In order to completely fulfil the requirements for NO_x- monitoring additional equipment (e.g. data recording, engine performance measurements) will have to be installed.
2. The operating ambient temperature should be 0 - 55°C for the sensor and the exhaust gas temperature max. 500°C at the probe.
3. The "MES1001 MARPOL" shall be installed, calibrated and operated in compliance with the manufacturer's instructions.

Documents:

- MES 1001 MARPOL User Guide
Doc. No.: 101450-MAN-Rev.A1, date: 2022-04
- Data Sheet MES1001 MARPOL
Doc. No.: 101222-DSH-A, Rev. date: 2021-09
- On-site Calibration Guide: MES1001 MARPOL
Doc. No.: 101170-MAN-B, Rev. date: 04-04-2022
- MES1001 MARPOL Compliance Report: Part 1
Doc. No.: 101163-REP-D, Rev. date: 04-04-2022
- MES1001 MARPOL Compliance Report: Part 2 - Equivalence Test
Doc. No.: 101164-REP-A, Rev. date: 04-04-2022

Remark

The compliance with relevant requirements of the DNV rules for classification – Ships, offshore units, and high speed and light craft has been type approved by DNV, Certificate No: TAA00002CT



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