

## Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

This certificate is issued to:

**PRODUCER** Heinzmann GmbH & Co.KG

**PLACE OF PRODUCTION** Am Haselbach 1  
79677 Schönau (Schwarzwald)  
Germany

**DESCRIPTION** Oil Mist Detection System TRITON I  
(Components marked with \* are available as EX- variants)

**TYPE**

Components:	Description:
Control Unit <i>Firmware: HZMV5.10 B 1002 / 10.12.2010</i>  (Control Unit CANBUS) <i>Firmware: HZMV5.10 B 1002 / 10.12.2010</i>	- connects up to 16 sensors via redundant serial bus system - 24 VDC (+30/-25%); max. 1,5A - 3 isolated relay contacts ("System Ready", "Main Alarm", "Pre-Alarm") - RS485, Modbus, optional CAN Bus - Sensitivity Level 1...10 adjustable
Remote Monitoring Unit <i>Firmware: HZMV5.11 B 1000 / 02.11.2010</i>	- connects up to 8 OMD units - with wire-break protection 33kOhm resistors - RS485, Modbus, CAN Bus
Sensor: Basic*/ Small*/ Extended * <i>Firmware: HZMV5.01 / 10.12.2010</i>	- Finger type sensor for Gas and Dual Fuel Engines - with two light emitting diodes for optical measurement
SOPS 65 Basic */ Extended * 53 / 65 Small *	- <u>S</u> plash <u>O</u> il <u>P</u> rotection <u>S</u> ystem prevents the sensor from being soiled with splash oil, but allows oil mist and water vapour to enter the sensor light beam (reaction time < 1sec.)
Diffusor 53 / 65	- add-on for SOPS sensors which are installed near or in a section with high splash oil concentration

**Certificate No.** 13/20053

**Issue Date** 23 October 2013

**Expiry Date** 22 October 2018

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Martin Lange  
Hamburg Technical Support Office  
Lloyd's Register EMEA

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<b>APPLICATION</b>	Marine applications for use in environmental categories ENV1, ENV2, ENV3 and ENV4 (applicable for the sensors only) as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 - 2002.
<b>DESIGN CODE</b>	Manufacturer's Specification IACS UR M67 2005 / Rev.1 2006 / Corr.1 2007 "Type Testing Procedure for Crankcase Oil Mist Detection and Alarm Equipment"
<b>RATINGS</b>	24V DC (18...31.2V DC)
<b>ADDITIONAL TESTS</b>	Low Temperature Test: +5°C/2hrs Degrees of Protection by enclosure: IP65  Safe Type Equipment: Oil Mist Detector type TRITON I II (2)G [Ex ia Gb] IIA for the Electronic, II 2G/- Ex ia IIA T4 Gb for the Sensor, see DEKRA Certificate: "BVS 11 ATEX E 094 X"
<b>OTHER CONDITIONS</b>	Final functional arrangements are to comply with appropriate Lloyd's Register Rules and will be subject of the Plan Approval process, if applicable. The suitability of the installation of the Oil Mist Detector is to be demonstrated for each type of engine. According to the requirements of IACS UR M67 an alarm has to be raised for an oil mist concentration of 2.5 mg/l. Therefore the alarm level should be adjusted to level 1...7.

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."*

*The Design Appraisal Document No. HDS/ETS 28888-13 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

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