



Lloyd's
Register

Type Approval Certificate

This is to certify that the undernoted product 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	TECNOVA HT s.r.l. Via Castellazzo, 29 20010 - Pregnana Milanese (MI) Italy
PLACE OF PRODUCTION	ELETTROMECCANICA B.T.B. s.r.l. Via della Tecnica, 6 52025 Levanella - Montevarchi (AR) Italy
DESCRIPTION	Marine Emission Monitoring System
TYPE	S-Keeper 7 - Full
APPLICATION	Marine use in environmental category ENV2 as defined in LR Test Specification No.1:2015
SPECIFIED STANDARD	Manufacturer's specification
CONDITION FOR INSTALLATION	--

"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 attached Design Appraisal Document No. 15/00092 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Certificate No.	15/00092
Issue Date	10 November 2015
Expiry Date	9 November 2020
Sheet	1 of 1

Luigi Benedetti - Senior specialist 10 November 2015	 Lloyd's Register
Trieste Technical Support Office Electrotechnical Systems	L. Benedetti
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Lloyd's Register EMEA

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Lloyd's Register EMEA

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Issue number 0

DESIGN APPRAISAL DOCUMENT

Date 10 November 2015	Quote this reference on all future communications TTS/ETS/MC/LB/4207360
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LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2014.

Issued to: TECNOVA HT s.r.l.
For: MARINE EMISSION MONITORING SYSTEM
Type: S-Keeper 7 - Full
TYPE APPROVAL CERTIFICATE No. 15/00092

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2014 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION:

Form 2571 - Application for Type Approval and/or Marine Equipment Directive Certification including Mutual Recognition Type Approval under EU RO Scheme from Lloyd's Register (LR)	20/07/2015
Form 2502 - Request For Marine Service - M134/2015	27/07/2015
Production Quality Assessment Form - TECNOVA HT s.r.l. - Pregnana Milenese (MI) - MLN1580900	30/09/2015
Production Quality Assessment Form - Elettromeccanica B.T.B. s.r.l. - Levanella - Montevarchi (AR) - MLN1580900	09/10/2015
ISO 9001:2008 - Perry Johnson Registrars, INC	11/04/2015
TECNOVA HT s.r.l. Quality Management System Certification. Registration Number: C2013-02482-R1	15/10/2016
MOD05-04#0 LR Setup Test Report S-Keeper 7 rev.1	05/11/2015
S-Keeper 7 Software Datasheet	29/09/2015
S-Keeper 7 Software Quality Plan	17/07/2003

Test reports:

CSI report n°0076/ME/CMP/15	23/10/2015
CSI report n°0017/ME/CMP/15	16/09/2015
P&P LMC n°RT-AB-063/15 rev.00	31/07/2015
TESLAB n°153050F	06/05/2015
TESLAB n°154069A	06/05/2015

Supplementary Type Approval Terms and Conditions

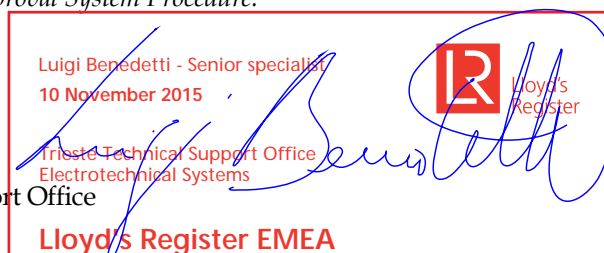
Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.

L. Benedetti
Senior Specialist
Trieste Technical Support Office
Lloyd's Register EMEA



Alarm and Monitoring System (Part 3)

Producer/Licence No.	Item Description	Technical Details	Category / Additional Tests	Remarks	Cert. No.
<p>TECNOVA HT s.r.l. Via Castellazzo, 29 20010 – Pregnana Milanese (MI) Italy.</p>	<p>Marine Emission Monitoring System S-Keeper7 - FULL S-Keeper7 - LITE S-Keeper7 - LITE-S S-Keeper7 - LITE-N S-Keeper7 - EASY S-Keeper7 - EASY-S S-Keeper7 - EASY-N</p>	<p>NO_x, CO₂, SO₂, CO, HC Measure with O₂ & Particulate (options) NO_x, CO₂, CO, HC Measure with O₂ & Particulate (options) SO₂, CO₂, CO, HC Measure with O₂ & Particulate (options) NO_x, CO₂, CO Measure with O₂ & Particulate (options) NO_x, CO₂, SO₂ Measure with O₂ & Particulate (options) SO₂, CO₂ Measure with O₂ & Particulate (options) NO_x Measure with O₂ & Particulate (options)</p> <p>- Aux Input: Engine Speed; Engine Torque; Air Inlet flow; Pressure & humidity sensors - Software: Windows based - I/O Connections: 1xEthernet RJ45; 1xRS-485; 1xSPDT contact - Power Supply: 230V 50Hz (4.8kVA)</p>	<p>ENV2, (2015)</p>	<p>Expires: 9 November 2020</p>	<p>15/00092</p>