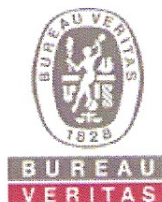


MARINE DIVISION

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Certificate number: 21222/A0 BV

File number: AP 3963

Product code: 3946H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

TYPE APPROVAL CERTIFICATE

This certificate is issued to

SCHALLER AUTOMATION GmbH & Co. KG

Blieskastel/Saar - GERMANY

for the type of product

OIL MIST DETECTION SYSTEMS

VISATRON Series

VN115/87plus, VN116/87plus and VN215/87plus

Regulations and standards:

BUREAU VERITAS Rules for the Classification of Steel Ships.
IACS UR M67.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

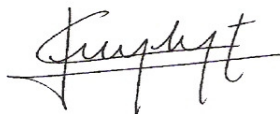
This certificate is valid until: 28 Apr 2014

At Neuilly, on: 28 Apr 2009

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office: BV HAMBURG
Surveyor: D. Hoepfner


L. COURREGELONGUE



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

VISATRON® Series (VNxxx/87plus) is based on an Oil Mist Detector connected to a suction-tube system to extract the atmosphere of the crankcase compartments.

Three versions are available:

- VN115/87plus is connected to a common Connecting Box - No identification of oil mist source
- VN116/87plus is connected to a 2-way Valve Box - Right or Left identification of oil mist source
- VN215/87plus is connected to a 10-way Valve Box - Individual identification of oil mist source.

1.1 - Common Characteristics:

Power Supply:	24 VDC, 2 A Max.
Air Pressure supply	2 to 15 Bar
Operating Temperature:	0°C ... +70°C
Environmental:	Mounting on diesel engines, in power distribution zone
Protection index:	IP 54
Sensitivity:	Adjustable by switch
Relay Outputs:	2 x Main Alarms, 1 x Pre-Alarm, 1x System Ready (Max. 60 VDC, 1 A)
Serial Interface:	RS485 bidirectional communication, alternative 4-20 mA
Software Version:	5.xx

2. DOCUMENTS AND DRAWINGS :

According to Schaller Automation documentation filed in AP 3963.

- Technical description of VN 115/87plus, VN166/87plus and VN215/87plus
- Operation Manual Part No. 11078, Ver. 1.5 dated 04/2008
- Dimension Drawings: VN115/87plus - DC050073, Ver. 1 dated 12.03.2008; VN116/87plus - DC070056, Ver. 1 dated 12.03.2008 and VN215/87plus - DC070023, Ver. 1 dated 12.03.2008.
- Electronic Circuit Diagrams.

3. TEST REPORTS :

CETECOM:

- EMC Test report No. 4-2912-01-01/07 dated 2008-01-28
- EMC Test report No. 4-3243-01-01/09 dated 2009-04-07
- Climatic Test Report No. 4-2018-1-2/06 dated 2006-05-18
- Vibration Test Report No. 3-5679-1-1/08 dated 2008-10-01
- Environmental Test Report Nr. 022a/94 dated 26.4.1994.

GSSO: Unreferenced Test Report according to IACS UR M67 dated 2007, February.

4. APPLICATION / LIMITATION :

- 4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - BUREAU VERITAS Environmental Category, **EC Code: 33**
- 4.4 - The equipment fulfils the EMC requirements for installation in General power Distribution Zones.
- 4.5 - Only Hardware and Firmware / Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The **VISATRON® Series (VNxxx/87plus)** is to be manufactured, examined and tested by **SCHALLER AUTOMATION GmbH & Co. KG** in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - Production sites are to be recognized by Bureau Veritas as per NR320 for HBV products. To this end **SCHALLER AUTOMATION GmbH & Co. KG** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

5.3 - **SCHALLER AUTOMATION GmbH & Co. KG** has declared to Bureau Veritas that the type of product described in this certificate are manufactured at the following production site:

SCHALLER AUTOMATION GmbH & Co. KG
Industriering 14
D-66440 Blieskastel/Saar
GERMANY

5.4 - Each equipment is to be supplied with manual(s) for installation, use and maintenance.

6. MARKING OF PRODUCT :

- Trade name.
- Date of manufacture and serial number.
- Equipment type or model identification under which it was type-tested.

7. OTHERS :

This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that:

**SCHALLER AUTOMATION GmbH & Co. KG
Industriering 14
D-66440 Blieskastel/Saar
GERMANY**

will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

***** END OF CERTIFICATE *****