



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-13231**

This is to certify that the
Monitoring System

with type designation(s)

Oil Mist Detectors VISATRON VN115/93, 116/93, 215/93, VN115/87plus, 116/87plus, 215/87plus

Manufactured by

Schaller Automation Industrielle Automationstechnik GmbH & Co KG
BLIESKASTEL, Germany

is found to comply with

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application

Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
Oil Mist Detectors VISATRON VN115/93, 116/93, 215/93	B	B	B	A	B
VN115/87plus, 116/87plus, 215/87plus	B	B	B	A	B

This Certificate is valid until **2014-12-31**.

Issued at **Høvik** on **2013-04-17**

DNV local station: **Essen CMC Southern Germany**

Approval Engineer: **Krzysztof Jankowski**



for **Det Norske Veritas AS**
Digitally Signed By: **Nesvåg, Odd Magne**

Location: **DNV Høvik, Norway**

...Signing Date: **2013-04-26**.....

Odd Magne Nesvåg

Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

Product description

Visatron Oil Mist Detector for diesel engine crankcase monitoring, types:
VN115/93, VN116/93, VN215/93,
VN115/87plus, VN116/87plus, VN215/87plus.

Approval condition

Spare parts are to be supplied in accordance with recommendation in manual.

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

All suction points from crankcase to oil mist detector unit to be equipped with "sampling funnels" of Schaller make. Special labyrinths inside the funnels prevent oil droplets from entering into suction pipes.

Suction pipes to be arranged according to Schaller instructions, with no low "pockets" where liquid oil may assemble and block the path between crankcase and oil mist detector unit.

Type Approval documentation

Manual for Oil Mist Detector, Visatron System
VN 115/93, VN 116/93, VN 215/93 No. 10980 Ed. 04W
Manual for Oil Mist Detectors, Art.no.<10024-EMC, Edition 04T for
VN 115/87-EMC, VN 116/87-EMC, VN 215/87-EMC

Drawings:

050072-012, 070055-010, 070022-009, all dated 95-04-12.
094 001, 094 002, 094 003, VN93 (16)

Massbild VN115/87 EMC EP115/99, 050072
Software PVdoc V1.15,
Oil Mist Detector Operating Instructions, Article No.: 2100 edition 06 99

Test reports: 330/97, 515/99, Cetecom 4-1055-1-1/03
Test reports for VN XXX/87 type approval of 12.08.99
EMC test report ESW 03509.023.95 dated 95-03-08
Test report no. 356/97 from GHMT regarding EMC testing of VISATRON VN 215/87-EMC.

Documentation submitted for IACS UR M67 required tests:

For VISATRON VN115, 116, 215/93
- GSSO Test Report, February 2007-04-04
- CETECOM Test report 4-1055-01-01/03
For VISATRON VN115, 116, 215/87-EMC
- GSSO Test Report, February 2007-04-04
- CETECOM Test report 4-1742-01-01/05

Extension 2008:

Binder with complete documentation of Visatron VN115/87, 116/87, 215/87plus:
- Ch. 1: Operation Manual. Version 1.7, 07/2008
- Ch. 3: Circuit diagrams
- Ch. 5: 4-2912-01-01/07 & 3-5679-1-1/08
- Ch. 6: 4-2018-1-2/06
- Ch. 7: Test Report M67, Acceptance date 2007-02-22, Ref.no: 07-008268

Certification Retention Survey Report DNV Essen, dated 2013-03-06.

Marking of product

Manufacturer: Schaller Automation Industrielle Automationstechnik GmbH & Co KG
Model name: As listed under Product description
Serial number: Unique for each delivered item

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.
Functional test required by IACS UR M67

Periodical assessment

The scope of the retention/renewal survey is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the survey are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE