



TYPE APPROVAL CERTIFICATE

Certificate No.

: HMB02586-OD002

Initial Approval: 19th February, 1998.

Product

: Oil Mist Detection System

Manufacturer

: Schaller-Automation Industrielle Automationstechnik GmbH & Co. KG.

Industriering 14, D-66440 Blieskastel, Germany

Product Description: Type: VISATRON Type VN 115/93, VN 116/93, VN 215/93

" See Appendix 1 "

Approval Condition: 1. This approval is granted on the basis of Test Report nos. 022a194 & 4-1055-1-1/03 by CETECOM GmbH and 03479.103.94 by Deutsche Aerospace AG & GSSO Test Reports carried out on 21st 22nd Feb., 2007.

2. The product of packing is to be marked with manufacturer name

and type designation on a suitable position. 3. Individual Product Certification is not required.

that the above-mentioned product has been approved THIS IS TO CERTIFY in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipment".

Pt. 9, Ch. 3, Art. 203 of the Rules for Classification, Steel Ships, IMO MSC/Circ.1086 & IACS UR M67(Corr. 1, Oct. 2007)

This Certificate is valid until 18th February, 2018. Issued at Busan, Korea on 5th March, 2013.

KOREAN REGISTER OF SHIPPING

General Manager of Materials and Equipment Team

Note: 1: The approval will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or the renewal of the Certificate is not underway.

2: The manufacturer should notify this Society of any modification or changes that may affect the validity of this Certificate.

Product Description and/or Approval Condition

Certificate No: HMB02586-OD002 Date of Issue: 5th March, 2013.

Product Descriptions;

 Power Supply
 Operating Voltage : 24 V DC :
 Current Consumption : Max. 3 A : 24 V DC \pm 25 %

3) Starting Current : 4 A

: 4 A semi time lag 4) Fuse

2. System of Protection : IP44

3. Operating Range : 0 °C to 70 °C with the highest humidity

4. Storage Temperature : -25 °C to +85 °C

5. Oil mist detectors protect large diesel engines of all applications from heavy consequential damage as a result of overheating.

6. Intended for 1) VN 115/93

- Basic design, suitable for the monitoring of trunk piston diesel engines with in-line and V cylinder arrangements, running at medium and high speed.

- Damage detection through a header pipe sampling system without localization of the point of damage.

2) VN 116/93

Design with a higher sensitivity, suitable for the monitoring of trunk piston diesel engines with in-line and V cylinder arrangements, running at medium and high speed.
 Damage detection through a header pipe sampling system with a display of the crankcase compartment half(left or right side of the position of the detector)

in which overheating damage has arisen.

The header pipe sampling system is same as in the VN 115/93, so the VN 116/93 can replace the VN 115/93 without modification of the suction system if localization of damage is called for.

3) VN 215/93

- Device with the highest sensitivity, suitable for the monitoring of large four stroke and crosshead engines running at medium and slow speed.

- Damage selection through the individual compartment suction pipeing system, with display of the compartment with the overheating damage.

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