



**BUREAU
VERITAS**

**Marine & Offshore
Division**

Certificate number: 32067/A0 BV

File number: AP 4374

Product code: 3571H

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

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Zenitel Norway A/S
Horten - NORWAY

for the type of product

SOUND SIGNAL RECEPTION SYSTEMS

VSS-V2 / Sound reception system

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

IEC 60945

IEC 62288

ISO 14859

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 mentioned above.

This certificate will expire on: 04 Aug 2019

For BUREAU VERITAS,

At BV OSLO, on 04 Aug 2014,

Rune MARSTEIN

Rune Marstein



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 & Offshore Division available on the internet site www.veristar.com. 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.

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BV Mod. Ad.E 530 May 2009

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Sound signal Reception System, including a master panel VSS-MP V2, slave panel VSS-SP V2 and microphones VSS-MU V2.

One weatherproof microphone unit with four directional microphones is mounted on top of the wheelhouse and connected to the VSS bridge panel.

By use of the microphone unit, the VSS-V2 system will detect the direction of incoming horn signal and activate the corresponding LED at the VSS-V2 front panel.

VSS-V2 Master Panel:

Description	Main Characteristic
Dimension (WxHxD)	: 280 x 140 x 90 mm
Mounting	: Flush
Housing	: Brushed aluminium with foil
IP Rating	: IP 22
Operation Voltage	: 24 VDC
Audio	: 70 Hz to 2 100 Hz
	: Ajustable volume
LEDs	: 8
Buttons	: Power, Override, Squelch, Dimmer, Volume
Current Load MAster & Mic	: Max. 200 mA
Including 1 slavepanel	: Max. 270 mA

VSS-V2 Slave Panel:

Description	Main Characteristic
Dimension (WxHxD)	: 280 x 140 x 51 mm
Power	: Internal from the master panel
Mounting	: Flush
Housing	: Brushed aluminium with foil
IP Rating	: IP 22
Operation Voltage	: 24 VDC
LEDs	: 8
Buttons	: Override, Dimmer, Volume

VSS-V2 Microphone Unit:

Description	Main Characteristic
Dimension (WxHxD)	: 280 x 140 x 51 mm
Housing	: Stainless Steel
IP Rating	: IP 66/67
Environnement	: -55°C to +55°C
Directional microphone	: 4
Power	: Internal from the master panel

2. DOCUMENTS AND DRAWINGS:

VSS Installation & Service Manual N° A100K11209 v1.1.

3. TEST REPORTS:

Nemko :

- Performance Test report N° E12067.00, dated 2012-07-11.
- Enviromental conditioning No:226664, dated 2012-12-11

DNV :

- Type Approval Certificate N° A-1294, dated 2012-10-24.

MM/Etronic :

- Test Specification N° SRS2012-VSS DNV, dated 2012-05-24.

4. APPLICATION / LIMITATION:

- 4.1 - BV Rules for the Classification of Steel Ships.
- 4.2 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - BUREAU VERITAS Environmental Categories, **EC Code: 31**(VSS master & slave), **EC Code 41S** (Microphone Unit).
- 4.4 - The Microphone Unit fulfils the EMC requirements for installation Bridge and Deck Zone.
- 4.5 - The installation shall comply with the Manufacturer's recommendation described in the above-referenced documentation.
- 4.6 - VSS-V2 has no data communication interfaces to other maritime electronic instruments, navigation and radio communication equipment.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above products are to be supplied by **Zenitel Norway AS**, in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.
- 5.3 - **Zenitel Norway AS**, has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products :

**Zenitel Norway AS
Bromsveien 17,
PO Box 1068.
3194 Horten
NORWAY**

6. MARKING OF PRODUCT:

- Trade name,
- Date of manufacture and serial number,
- Equipment type number 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 System at any time, and that **Zenitel Norway AS - P.Box 1068 - 3194 Horten - NORWAY**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the System and the conditions of this approval.

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