DNV·GL

Certificate No:
TAA00000CY

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Hands Free Voice Talk Back System and Public Address System

with type designation(s)
ETB-100A

Issued to
Zenitel Norway AS
HORTEN, Norway

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :

See page 2

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2021-03-30**.

Issued at **Høvik** on **2016-03-31**

for **DNV GL**

DNV GL local station: **Sandefjord**

Approval Engineer: **Rolf Heger**

Jan Tore Grimsrud
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.

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Product description

Hands Free Voice Talk Back System and Public Address System ,consists of the following components[1)] :

Module	Article no	Location
Centrals	ETB-100A	Protected
Talk Back Substations	STB-1	Protected
	STB-2	Protected
	STB-3	Protected
	STB-5	Protected
	STB-6	Protected
	STB-6GN	Protected
	HE-112M	Protected
PA power Amplifiers	AW8121- 120W	Protected
	AW8241 - 240W	Protected
	P8501-500W	Protected
	VPA-120	Protected
	VPA-240	Protected
	VPA-400	Protected
Emergency PA Call station	VMT-603	Protected
	VMP-603	Protected
Talk Back and General PA microphones	MB-30G	Protected
	ETC-1-TB	Protected
Power Supply unit	PRO-M 24VDC/5A	Protected

[1)] Actual installation may vary based on requirements for individual installations. Only modules listed in certificate are approved for insallation.

Application/Limitation

Application

1- The product approval is limited to:
    1- Two-way voice communication onboard small vessels not requiring more than 3 extensions and not requiring simultaneouse calls between substations.
    2- PA system onboard small cargo vessels. (The audibility of the PA system shall be tested for each installation.)
2- The system is also tested based on the manufacturer's definition of Talk Back system and found to be in accordance with the stated functionality in the manuals.

Limitations

1- The systems cannot be used as hands-free two way voice communication system as required by January 2014 DNV Rules Pt. 6 Ch. 8 Sec. 6 J108.
2- The system cannot be used as a PA system onboard passenger vessles.
3- The unit VML-1520 was only tested with regards to functionality, and the environmental requirements for the unit have not been documented. The unit is subjected to approval for environmental requirements for each installation.
4- The units ETC-1-TB and P-MT7 have not been tested based on the vibration requirements. The units are subject to approval regarding vibration for each installation.

Type Approval documentation

DNV GL No.	Doc. ref.	Rev.	Description
1	16 911 007	1.0/7. Sep. 2007	Manual: Vingtor, Installation and Operational Manuals, VPA Public Address Amplifiers, VPA-120/240/400
2	E501412-1	-	Report: Delta, Environmental Test report DANAK-197395
3	A100K11162	V1	Manual: Vingtor, Command Talk-Back & Public Address System ETB-5 / ETB-10 / ETB-10A / ETB-100 / ETB-100A
4		10-2-06	Report: DNV, Performance test for ETB for DNV Type Approval, Rev 10_2_06
5	20793	0	Report: Applica, EMC testing of Vingtor ETB100A according to IEC60945
6	5P05968	2016-02-26	Report: SP, Clima test, Vibrationtest and Compass safe distance test of ETB-100A according to IEC60945

Tests carried out

- IEC 60945 Fourth Edition (2002)
- Performance tests: Functional tests according to DNV Type Approval program 848.22

Marking of product

The Manufacturer and Type Designation to be applied to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

Periodical assessment

A retention survey is to be performed at least once every second year, and again upon renewal of this certificate.
The scope of the retention/renewal survey is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.