CERTIFICATE OF CONFORMITY – EC

Certificate No:
MEDG0000009

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Bridge Navigational Watch Alarm System (BNWAS)

with type designation and item/batch number
Telemerkki TM-BNWAS - 33076

Issued to
Wärtsilä Norway AS
STORD, Norway

is, by design assessment and product verification, in accordance with Module G in the Directive and found to comply with
Annex A.1, item No. A.1/4.57 and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation V/18, IMO Res. A.694(17), MSC.128(75) & 191(79)

Further details of the equipment and conditions for certification are given overleaf.

Høvik, 2016-03-01
for **DNV GL AS**

Notified Body No.: **0575**

Vidar Dolonen **Head of Department**	DNV GL local office: **Høvik**	**Frederik Tore Elter** **Surveyor**

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Job Id: **344.1-004847-1**
Certificate No: **MEDG0000009**

Product description

TM-BNWAS consisting of the following component:

Hardware modules:

Unit	Type Designation	Serial Numbers	
Main Control Panel	TM-BNWAS-MAIN	PS Fwd panel Main	SN00017013
		SB Fwd panel Panel	SN00017014
Data Interface Unit	TM-BNWAS-APDI2 TM-BNWAS-APAI1 TM-BNWAS-APAI2	Main unit 1 (2A1)	SN00015036
		Main unit 2 (23A1)	SN00015081
		Power Supply 230/24V No.1	SN000012764
		Power Supply 230/24V No.2	SN000012765
		Junction board (10A1)	
Motion Detectors	TM-BNWAS-ICS-PDL1-W18G	Motion Detector 1	SN00017033
		Motion Detector 2	SN00017034
		Motion Detector 3	SN00017035
		Motion Detector 4	SN00017036

Software modules:

Main Control Panel

- TM-BNWAS-DISPLAY 1.xx, Windows CE Core 5.0

Data Interface Unit

- TM-BNWAS 1.xx, Linux EFDC 2.x

Application/Limitation

- Installation to be in accordance to the manufactures Product Manual and requirements for BNWAS.
- TM-BNWAS may provide alert management (AMS), functionality is not part of certification.

Type Examination documentation

DNV GL No	Title	Drawing No
12	Survey report 84.02	33076
11	Survey report 40.9a	33076
9	DNV BNWAS TA certificate	A-12347
8	Test Report: SINE vibration tests	VTT-S-01312-13
7	Test Report EMC - Motion detector interface	230738A
6	Test Report Environmental (EN60945)	230738B
5	Test report Compass safe distance	E13069.00
4	Operation Manual – BNWAS (+AMS)	H2652-SP11192-E-MB-791-0301
3	Operation Manual Motion Detectors Interface	H2652-SP11192-E-MB-791-0302

Tests carried out

- Performance testing, IEC 62616 (2010)
- Environmental testing, IEC 60945 (2002)
- Serial interface testing, IEC 61162-1 (2010)
- Presentation of Navigation information, IEC 62288 (2008)

Marking of product

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

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according Article 11 in the Council Directive 96/98/EC on Marine Equipment. The Mark of Conformity shall be followed by DNV GL Notified Body No. and the two last digits of the production year.