

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive (EU) 2015/559, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. 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(s)
SeaQ Bridge BNWAS

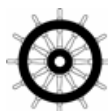
Issued to

Vard Electro AS
Tennfjord, Norway

is found to comply with the requirements in the following Regulations/Standards:

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.

This Certificate is valid until **2021-09-05**.Issued at **Høvik** on **2016-09-06**DNV GL local station:
ÅlesundApproval Engineer:
Roger LauritsenNotified Body
No.: **0575**for **DNV GL AS**-----
Vidar Dolonen
Head of Notified Body

Product description

The SeaQ Bridge BNWAS comprise of the following module types:

- Display and control units
- Interface plate
- Operator units
- Sounders and detectors

Modules are described in detail in SeaQ HW certificate system platform 1 (SP1). See Type examination documentation.

Software version: 2.x

Operating system: Linux

Application/Limitation

- Installation to be performed according to the manufactures Product Manuals.
- The system shall be powered from a battery maintained power supply which has capacity for 6 hours.
- SeaQ Bridge BNWAS may fulfil the additional DNV GL requirements for BNWAS uses onboard ships with NAUT notations, depending of system configuration and installation.
- Integrated functionality for a Bridge Central Alert Management (CAM), Telephone Directory, Lighting and Window heating is tested and found to not to be inferior to the BNWAS function.

Type Examination documentation

DNV GL No	Document Ref.	Rev.	Description
2	TAA000006E	1	Certificate: SeaQ HW
1	74008-USG-21-V2	RevB	Manual: SEAQ Bridge BNWAS, Product User Manual
4	74007-BENC-00002	1.1.0-A	Report: SeaConcept BWS- Type Testing (TT) Protocol 2
3	74007-BENC-00001	V1.0.0-A	Report: SeaConcept BWS- Type Testing (TT) Protocol

Tests carried out

- Performance testing BAM, MSC.302(87)
- Performance testing BNWAS, IEC 62616 (2010), including IEC 62616 Corrigendum 1 (2012)
- Environmental testing, IEC 60945 (2002), including IEC 60945 Corrigendum 1 (2008)
- Serial interface testing, IEC 61162-1 (2010)
- Serial interface testing, IEC 61162-2 (1998)
- Presentation of Navigation information, IEC 62288 (2014)
- DNV GL Rules Pt.6 Ch. 3 Sec. 3, 4 and 5



Job Id: **344.1-003724-2**
Certificate No: **MEDB00001N7**

Marking of product

The Manufacturer and Type Designation 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 to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.