

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Alarm Management System

with type designation(s)
K-Bridge BAM

Issued to

Kongsberg Maritime AS
KONGSBERG, Norway

is found to comply with
DNV GL rules for classification – Ships

Application :

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This Certificate is valid until **2021-06-29**.

Issued at **Høvik** on **2016-06-30**

DNV GL local station: **Sandefjord**

Approval Engineer: **Steinar Kristensen**

for **DNV GL**

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.

Product description

K-Bridge BAM is integrated with K-Bridge Conning, running on the K-Bridge Operator Station.

See separate DNV GL Type Approval certificate TAA00000FJ for details on Hardware for K-Bridge Operator Station.

Software: K-Bridge 7.1.4

Application/Limitation

- K-Bridge BAM is found to comply with requirements for Bridge Alert Management System in the following rules:
 - DNV Rules Pt.6 Ch.8 and DNV Rules Pt.6. Ch.20 (2014-01)
 - DNV GL Rules Pt.6 Ch.3. Sec.5 (2016-01)
- Installation to be performed according to the manufactures documentation, as listed in Type Examination Documentation.

Type Approval documentation

DNV GL No	Doc. Id	Rev.	Description
9	TAA00000FJ	2016-06-30	Certificate: DNV GL, Type Approval of K-Bridge and K-Nav System Platforms
7	415228	A	Report: Kongsberg Maritime, K-Bridge BAM Type Approval test report
6	401087	A	Manual: Kongsberg Maritime, K-Bridge Conning Built-In Operator Station, Maintenance manual
5	401086	A	Manual: Kongsberg Maritime, KM05 K-Bridge Conning Operator Station, Maintenance Manual
4	400984	A	Manual: Kongsberg Maritime, KM05 K-Bridge Conning Operator Station, Installation Manual
3	400942	A	Manual: Kongsberg Maritime, K-Bridge Conning Built-In Operator Station, Installation Manual
2	400842	C	Manual: Kongsberg Maritime, K-Bridge Conning-CAM-HMI Operator Manual
1	300892	F	Manual: Kongsberg Maritime, K-Bridge Sensor Integrator Installation Manual

Tests carried out

- Environmental testing: IEC 60945 (2002)
- Serial interface testing: IEC 61162-1 (2010)
- Presentation of Navigation information: IEC 62288 (2014)
- Performance testing: DNV GL Rules Pt.6 Ch.3 Sec.5,
Relevant parts of MSC.302(87), Module B

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.

Job Id: **262.1-022790-1**
Certificate No: **TAA00000GA**

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