

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), 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 Heading control system (HCS)**

with type designation(s)  
**K-Bridge Autopilot**

Issued to  
**Kongsberg Maritime AS**  
**KONGSBERG, Norway**

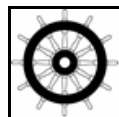
is found to comply with the requirements in the following Regulations/Standards:  
Regulation **(EU) 2015/559**,  
**Annex A.1, item No. A.1/4.16 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation V/18 & V/19, IMO Resolution A.342 (IX) & A.694(17) and IMO Resolution MSC.64(67) Annex 3 & 191(79)**  
**IMO Resolution MSC.302(87) Performance standards for Bridge Alert Management**

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

This Certificate is valid until **2022-01-30**.

Issued at **Høvik** on **2017-01-31**

DNV GL local station:  
**Sandefjord**



for **DNV GL AS**

Approval Engineer:  
**Steinar Kristensen**

Notified Body  
No.: **0575**

**Vidar Dolonen**  
**Head of Notified Body**

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Job Id: **344.1-000613-4**  
Certificate No: **MEDB00001MX**

## Product description

Kongsberg Maritime K-Bridge Autopilot system comprising the following items:

**Hardware:**  
K-Bridge Operator station : **Model/Type:** As defined in separate certificate \*)

**Software modules:**  
K-Bridge System Platform SW : As defined in separate certificate \*)

\*) Type Examination Certificate for K-Bridge and K-Nav System Platforms, see Type Examination documentation.

*The K-Bridge Autopilot can be delivered in K-Bridge Console KM05 or as built in version for other consoles*

## Application/Limitation

- The installation shall be installed and tested on board according manufacturers manuals. See Type Examination documentation below for details.
- The K-Bridge HCS is found to be in compliance with the requirements for MultiFunctionDisplay (MFD), when connected in a KM network. The MFD may serve as Radar, ECDIS, back-up ECDIS, HCS, TCS and BNWAS.

## Tests carried out

- Performance testing: ISO 11674 (2006)
- Environmental testing: IEC 60945 (2002)
- Serial interface testing: IEC 61162-1 (2010) and IEC 61162-1 (2016)
- Presentation of navigation information: IEC 62288 (2014)

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### **Type Examination documentation**

<b>DNV GL No</b>	<b>Document Id.</b>	<b>Rev.</b>	<b>Description</b>
58	417886	A	Manual: Kongsberg Maritime, K-Bridge Autopilot, Operator Manual Release 8.0
57	419292	A	Report: Kongsberg Maritime, K-Bridge Autopilot Type Approval Test report
56	TAA00000FJ	Latest rev.	Certificate: DNV GL, K-Bridge and K-Nav system platforms
33	KLM1.0061	B	Report: Kongsberg Fimas, Environmental test of Aim Safe System
30	174026	C	Report: Kongsberg Maritime, IO test report SDP Autopilot.
29	1042001	A	Report: Kongsberg Maritime, K-Bridge HCS Performance test report

### **Marking of product**

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to the product. In addition the product shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.