

TYPE APPROVAL CERTIFICATE**This is to certify:****That the Miscellaneous**

with type designation(s)
K-Bridge and K-Nav system platforms

Issued to
KONGSBERG MARITIME AS
Kongsberg, Norway

is found to comply with
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids MSC.191(79) Performance standards for presentation of navigation-related information on shipborne navigational displays

Application :

See page 2

Issued at **Høvik** on **2020-10-22**

for **DNV GL**

This Certificate is valid until **2023-06-21** .

DNV GL local unit: **Sandefjord**

Approval Engineer: **Steinar Kristensen**

Marta Alonso Pontes
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Job Id: **262.1-012702-11**
Certificate No: **TAA00000FJ**
Revision No: **6**

Product description

See appendix for details of the Kongsberg Maritime K-Bridge and K-Nav system platforms.

Application/Limitation

- Installation is to be performed according to the manufacturer's documentation.
- This certificate only identifies HW and SW used in K-Bridge and K-Nav systems, and is intended to be read in conjunction with the individual certificates covering the various K-Bridge and K-Nav systems. For details on compliance to system requirements, please see individual system certificates for K-Bridge and K-Nav systems where reference is made to this certificate.
- Topology including K-Master as operator station for K-Bridge is not in compliance with requirements in DNV GL rules Pt.6 Ch.3 Sec.3 and Pt.6 Ch.3 Sec.5.
- Installations which includes optional K-Master as operator station for K-Bridge are subject for separate case-by-case approval.

Type Examination documentation

See appendix for details.

Tests carried out

- Environmental testing: IEC 60945 (2002) incl Corr.1 (2008)
- Serial interface testing: IEC 61162-1 (2016)
- Presentation of Navigation information: IEC 62288 (2014)

Marking of product

Marking of products under the Marine Equipment Directive (MED) 2014/90/EU is to be in accordance with requirements specified therein.

See individual MED-B and Type Approval certificates with references to this certificate for details.

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate. The periodical and renewal assessments may be combined with the annual assessments for the Module-D certificate according to the Marine Equipment Directive 2014/90/EU.

The scope of the periodical/renewal assessment 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/Notified Body.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnvgl.com>

APPENDIX

Product description

Kongsberg Maritime K-Bridge and K-Nav system platforms comprising the modules listed below (see individual system certificates for information on required configurations).

- **K-Bridge Operator station**

K-Bridge Operator station is available in versions as either Panel Computer with integrated display and backup sensor interface, or Computer with separate Display unit and backup sensor interface, as specified below:

Panel Computer with integrated Display and Sensor Interface:

- Panel PC ¹⁾ : Panel PC HD 27T22, Computer with i5 processor, Integrated display, embedded graphical processor and sensor interface (PCA100293-1; 4x NMEA input/output module)

or

Panel PC HD 24T22, Computer with i5 processor, integrated display, embedded graphical processor and backup sensor interface (PCA100293-1; 4x NMEA input/output module)

or

Computer with separate Display Unit and backup sensor interface:

- Main Computer Unit : HP/ Kongsberg MP5810 or MC330 i3 LAN or MC330 i7 LAN, incl adapter USB to 1 serial RS232 (for MC330)

- Graphical Interface : MP5810: On-board Display Port/HDMI output
MC330 i3 LAN and MC330 i7 LAN: On-board Display Port/HDMI output

- Display Unit : MD24 16:9 ECDIS Glass Or
Display 27" FHD ECDIS S MK4 or
Display 27" FHD ECDIS KM05 MK4 or
Display 27" FHD ECDIS G MK2 or
Display 32" FHD ECDIS G MK1 or
Display 55" UHD ECDIS G MK1 ²⁾

- Backup sensor interface : CN8E; 6xNMEA inputs, 2x NMEA inputs/outputs, or Adapter USB 2.0 to 4x RS-422/485

Option:

- Computer accessories : Adapter USB 2.0 to 4x USB 2.0 HUB

Sensor Interface : K-Bridge Sensor Integrator K-SINT, see below

¹⁾ Panel PCs supports utilizing the K-Bridge RADAR CP360 feature, limited to combining the radar image for up to 2 radar antennas.

²⁾ Reading distance of Display 55" UHD ECDIS G MK1 is 2.2m when applied with a resolution of 1920x1080.

Job Id: **262.1-012702-11**
Certificate No: **TAA00000FJ**
Revision No: **6**

Input Device	:	COP-05 Input and COP-05 ALC NAV or COP-05 ALC NAV standalone or TBP Track Ball Panel or TPP Touch Pad Panel or K-Master (see below)
Operator Panels (optional)	:	COP-05 BU NAV COP-05 Heading Wheel, or MPID- Multi Purpose Input Device
Computer Keyboard	:	Cherry
Power Unit ³⁾	:	Phoenix Contact QUINT-PS/1AC/24DC/10 or Phoenix Contact PSU TRIO-PS-2G/1AC/24DC/5/B+D
K-Bridge Sensor Integrator K-SINT:		
Remote Controller	:	RCU502 or RCU502i
Serial Line Interface Module, 4 NMEA In/Out	:	RSER200-4
RBUS Hub Module	:	RHUB200-5
Power Supply	:	Phoenix Contact QUINT-PS/1AC/24DC/10
Network Switches	:	Moxa Ethernet Switch EDS-308 or EDS-316 or EDS-316-MM-SC, Up to 16 10/100BaseT(X) ports and 2 100BaseFX ports
<u>Option:</u>		
Remote IO modules	:	RMP420, RDIOR420 and RMP201-8
K-Master Operator station (option) ⁴⁾		
Main Computer Unit	:	MC330 i3 LAN or MC330 i7 LAN or MP5810 Base Model or TCP PC NEO CE-HW-01
Main Display Server	:	MC330 i3 GPU incl USB 3.1-4x Gb Ethernet or MP5810 4-Display model or MP5810 NAV RoLAN model
Network Units	:	Moxa Ethernet Switch: - IKS-6728A-4GTXSFP-HV-HV-T ⁵⁾ or - EDS-316
USB Extender	:	Veinland USB Extender VL-66199-T/R
Power Unit	:	Phoenix Contact QUINT-PS/1AC/24DC/10
Operator Interface	:	Display 13.3" TCP, K-Master units (Alarm Panel, I/O Controller)
Display Unit	:	MD24 16:9 ECDIS Glass or Display 27" FHD ECDIS S MK4 or Display 27" FHD ECDIS KM05 MK4 or Display 27" FHD ECDIS G MK2 or Display 32" FHD ECDIS G MK1 or Display 55" UHD ECDIS G MK1 ⁶⁾

³⁾ Power Unit may not be required in configurations where Input Device or Operator Panels are powered via USB from the computer.

⁴⁾ See Application/Limitation on page 2

⁵⁾ Ethernet switch may be installed with modules and interfaces listed in type approval certificates TAA0000043 and TAA000006N

⁶⁾ Reading distance of Display 55" UHD ECDIS G MK1 is 2.2m when applied with a resolution of 1920x1080.

Job Id: **262.1-012702-11**
Certificate No: **TAA00000FJ**
Revision No: **6**

- **K-Nav Operator station**

K-Nav Operator station is available in versions as either Panel Computer with integrated display and sensor interface, or Computer with separate Display unit and sensor interface, as specified below:

Panel Computer with integrated Display and Sensor Interface:

- Panel PC : Panel PC HD 27T22, Computer with i5 processor, Integrated display, embedded graphical processor and sensor interface (PCA100293-1; 4x NMEA input/output module)

or

Panel PC HD 24T22, Computer with i5 processor, integrated display, embedded graphical processor and backup sensor interface (PCA100293-1; 4x NMEA input/output module)

Input Device : TBP Track Ball Panel, or
TPP Touch Pad Panel

Operator Panels (optional) : COP-05 Panel NAV Standalone (for Radar only)

Computer Keyboard : Cherry

Power Unit ⁷⁾ : Phoenix Contact QUINT-PS/1AC/24DC/10 or
Phoenix Contact PSU TRIO-PS-2G/1AC/24DC/5/B+D

Option:

Network switches : Moxa Ethernet Switch:
EDS-308 or EDS-316 or EDS-316-MM-SC,
Up to 16 10/100BaseT(X) ports and 2 100BaseFX ports

- **Software modules for K-Bridge and K-Nav Operator stations**

Operating System : Windows 10
K-Bridge System Platform SW : 8.2.x, update 1 onwards
K-Master release : 2.1.x, update 6 onwards
Navtor SDK : 2.0.x
C-Map SDK (for SENC only) : 6.0.x
NAV WEB HMI Interface : 1.x

- **K-Bridge Multi Indicators**

Computer with integrated Display and interfaces : Panel PC 13.3" 1.3GHz 13T30, 4x RS 485/ RS 422 ports

Multi Indicator SW version : 1.0.x

Option:

Network switches : Moxa Ethernet Switch:
EDS-308 or EDS-316 or EDS-316-MM-SC,
Up to 16 10/100BaseT(X) ports and 2 100BaseFX ports

⁷⁾ Power Unit may not be required in configurations where Input Device or Operator Panels are powered via USB from the computer.

Job Id: **262.1-012702-11**
 Certificate No: **TAA00000FJ**
 Revision No: **6**

Type Examination Documentation

DNV GL No	Document ID	Rev.	Description
542	459234	B	Manual: KM, System Config Manual, MC330
541	423726	C	Manual: KM, K-Master FWD Bridge Workstation MK2, Built-in, Maintenance Manual
541	423726	B	Manual: KM, K-Master FWD Bridge Workstation MK2, Built-in, Maintenance Manual
540	462729	A	Manual: KM, K-Master Server Cabinet MK2, Maintenance Manual
539	450174	B	Manual: KM, MC330 Computer [ThinkStation P330 Tiny], Maintenance Manual
538	MRA000002D	2019-11-27	Certificate: DNVGL, MRA certificate for Hatteland Series E MMC Standard and Compact computers, KM Doc. No. 463254/A
537	E20096.02	02	Report: Nemko, IEC 60945 and IACS E10 test report for USB-232-IND-HF and USB-422-IND-HF Computer Adapters, KM Doc. No 464983/C
533	E19179.01	01	Report: Nemko, EMC and environmental test report for computer adapters (DisplayPort 1.2 to 3-Port video splitter, EX-1330M Ethernet adapter, EX-1163HM USB Hub, EX-1339HMVS USB to 8-port RS-232/422/485), KM Doc. No 460139B
528	S327A(1)(2)(3)(4)(5)-2020	2020-06-16	Report: CSIC, Power supply (Excessive/Extreme/Short term variations) tests for ThinkStation P330 Tiny
527	S078A-2020	2020-05-15	Report: CSIC, EMC and environmental test report for ThinkStation P330 Tiny with i3 and i5 processors
526	S498A-2019	2019-11-11	Report: CSIC, EMC and environmental test report for ThinkStation P330 Tiny
525	S498A(3)-2019	2020-03-27	Report: CSIC, EMC and temperature test report for ThinkStation P330 Tiny with i7 processor
522	424182	A	Manual: Kongsberg Maritime, K-Bridge Conning Built-In Operator Station Maintenance Manual
521	424056	C	Manual: Kongsberg Maritime, K-Bridge Conning KM05 Centre Operator Station Maintenance Manual
520	458447	A	Manual: Kongsberg Maritime, K-Bridge MFD KM05/BI OS INS Operator Station Maintenance Manual
519	457102	A	Manual: Kongsberg Maritime, K-Bridge Conning KM05/BI INS Maintenance Manual
518	457101	A	Manual: Kongsberg Maritime, K-Bridge Conning KM05/BI OS INS Installation Manual
517	451423	C	Manual: Kongsberg Maritime, K-Bridge MFD KM05/BI OS INS Operator Station Maintenance Manual
516	426225	B	Manual: Kongsberg Maritime, Planning Station Maintenance Manual
515	424260	C	Manual: Kongsberg Maritime, K-Bridge MFD KM05 OS-650 Operator Station Maintenance Manual
512	181018002T	2019-02-12	Report: Cal-Tech, EMC and environmental test report for HD 13T30 MMC-2G7-3AM1HA-ES-1 (Multi Indicators)
511	180620002T	2019-03-13	Report: Cal-Tech, EMC and environmental test report (selected tests) for HD 13T30 MMC-206-AAM1IA-ES (Multi Indicators)
510	EN181113C17	2019-01-24	Report: BV, Partial EMC test report for HD 13T30 MMC-2G7-3AM1HA-ES-1 (Multi Indicators)
508	181200197TWN-001	2018-12-20	Report: Intertek Testing Services, IPx2 test report for HD 13T30 MMC-2G7-3AM1HA-ES-1 (Multi Indicators)
506	TH1_18_0446	2018-11-26	Report: PAL acoustics, Sound pressure level test report for HD 13T30 MMC-2G7-3AM1HA-ES-1 (Multi Indicators)

Job Id: **262.1-012702-11**
Certificate No: **TAA00000FJ**
Revision No: **6**

DNV GL No	Document ID	Rev.	Description
505	VS-TV-071130-02	2018-11-30	Report: Vibration Source Tech, Vibration test report for HD 13T30 MMC-2G7-3AM1HA-ES-1 (Multi Indicators)
504	181018001T	2019-02-20	Report: Cal-Tech, EMC and environmental test report for HD 08T30 MMC-206-AAM1IA-ES-1 (Multi Indicators)
503	ME802502	01	Report: International Certification Corp., EMC partial test report for HD 08T30 MMC-206-AAM1IA-ES-1 (Multi Indicators)
502	18-11-BAD-015-02L	2018-11-13	Report: ETC, Acoustics sound pressure level test for HD 08T30 MMC-206-AAM1IA-ES-1 (Multi Indicators)
500	VS-TV-071130-01	2018-11-30	Report: Vibration Source Technology, Vibration test report for HD 08T30 MMC-206-AAM1IA-ES-1 (Multi Indicators)
499	DOC207334-1	02	Report: Hatteland, 08T30 and 13T30 Minimum brightness test of buttons and status indicators (Multi Indicators)
498	DOC207094-1	02	Report: Hatteland, IEC62288 Ed. 2.0 Display Test for HD 13T30 MMC (Multi Indicators)
497	DOC207092-1	02	Report: Hatteland, IEC62288 flicker test report for HD 13T30 MMC (Multi Indicators)
496	180620001T	2018-11-29	Report: Cal-Tech, EMC and environmental test report (selected tests) for HD 08T30 MMC-206-xAM1HA-ES (Multi Indicators)
485	453000	A	Manual: Kongsberg Maritime, Panel PC 13.3" 1.3GHz 13T30, Instruction Manual (Multi Indicators)
482	454288	A	Report: Kongsberg Maritime, Hardware Compatibility Endurance Test Report, Hatteland HD27T22 Panel PC
481	30058	0	Report: Applica, IEC 61162-1/-2 test report for HD 08T30 MMC-2G7-3AP1HA-ES-1 (Multi Indicators)
473	452405	C	Report: Kongsberg Maritime, Presentation of black box sensor Web-HMI in K-Bridge, System Test Report
469	MRA000000S	2	Certificate: DNVGL, EU-RO-MR TA certificate for DuraMON15 LED, DuraMON19 LED, DuraMON22WS, DuraMON24WS and DuraMON27WS
468	MRA000000H	3	Certificate: DNVGL, EU-RO-MR TA certificate for DuraMON 19 GLASS, DuraMON 24 GLASS, DuraMON 26 GLASS, DuraMON 27 GLASS and DuraMON 32 GLASS displays
467	MRA000001B	2017-08-15	Certificate: DNVGL, EU-RO-MR TA certificate for DuraMON 55 GLASS display
465	404702	A	Manual: Kongsberg Maritime, Display 55" UHD ECDIS MK1-Installation Manual
464	404684	A	Manual: Kongsberg Maritime, Display 55" UHD ECDIS MK1-Instruction Manual
460	446464	A	Report: Kongsberg Maritime, Test report for MPID with K-Bridge HCS and TRK
456	P17-0017	2017-07-06	Report: SP, EMC and environmental test report for DuraMON 55 Glass
454	448166	A	Report: Kongsberg Maritime, Display 27" FHD ECDIS S MK4 System Test Report
453	448165	A	Report: Kongsberg Maritime, Display 27" FHD ECDIS KM05 MK4 System Test Report
452	448164	A	Report: Kongsberg Maritime, Display 27" FHD ECDIS G MK2 System Test Report
451	P18-0040	2018-06-18	Report: EKTOS, EMC and environmental test report for DuraMON 27 display
450	355288r00	00	Report: Nemko, Display performance test report for DuraMON 27 GLASS

Job Id: **262.1-012702-11**
Certificate No: **TAA00000FJ**
Revision No: **6**

DNV GL No	Document ID	Rev.	Description
449	443339	A	Report: Kongsberg Maritime, Display 55" UHD ECDIS G MK1 System Test Report
448	352127r01	01	Report: Nemko, Display performance test report for DuraMON Glass 55
447	406444	M	Manual: Kongsberg Maritime, MP5810 Maintenance Manual
446	E18116.00	00	Report: Nemko, Multi Purpose Input Device (MPID), EMC and Environmental test report
438	E18081.00	00	Report: Nemko, EMC and Environmental test report for RCU502i
429	TAA000006N	2	Certificate: DNVGL, Type Approval certificate for EDS-series Ethernet switches incl SFP-1G and SFP-1F series of modules
426	TAA0000043	2015-12-10	Certificate: DNVGL, Type Approval certificate for Moxa IKS6700A Series Ethernet Switches
425	TL15055	Issue 5	Report: MS Testing, EMC and environmental test report for Moxa IKS-6728A ethernet switch
421	424259	D	Manual: Kongsberg Maritime, K-Bridge MFD KM05 OS-650 Operator Station, Installation Manual
420	424247	B	Manual: Kongsberg Maritime, K-Bridge MFD OS Built-In Operator Station, Installation Manual
419	424181	A	Manual: Kongsberg Maritime, K-Bridge Conning Built-In Operator Station, Installation Manual
418	424055	C	Manual: Kongsberg Maritime, K-Bridge Conning KM05 Centre Operator Station, Installation Manual
416	369710	C	Manual: Kongsberg Maritime, UPS Eaton 3kVA MkVI, Installation Manual
415	161170	D	Manual: Kongsberg Maritime, Cabling- General Requirement, Installation Manual
414	161012	K	Manual: Kongsberg Maritime, Kongsberg 700 Family Specification of Earthing, Shielding and Power distribution principles
413	DOC206364-1	01	Report: Hatteland Display, IEC62288 flicker test report for HD 24T22 MMC Maritime Multi Computer
411	21111	1	Report: Applica, EMC and environmental testing of HT B30GH STC-A3x-M13200-ES Compact Fanless Computer
408	20941	0	Report: Applica, EMC and environmental testing of HD 27T22 MEC-CGU-xABR Maritime Multi Computer
407	20885	0	Report: Applica, EMC and environmental testing of HD 27T22 MEC-CGU-AIBR Maritime Multi Computer
405	20747	0	Report: Applica, EMC and environmental testing of HT C02HJ STC-A4H-A010-14 Computer
392	21107	02	Report: Applica, EMC and environmental test report for HD 24T22 MMC-M82-4GP186-ES Maritime Multi Computer
391	435253	A	Report: Kongsberg Maritime, Type Approval System Test Report for Panel PC 24" 16:9 ECDIS T22 IEC 62288 Ed.2.0 Clause 4&7
390	DOC206335-1	02	Report: Hatteland Display, Conformance test report for HD 24T22 MMC-M82-4GP186-ES
387	DOC205958-1	2	Report: Hatteland Display, Minimum brightness test of GDCX rev 5
385	435252	A	Report: Kongsberg Maritime, Type Approval System Test Report for Display 32" FHD ECDIS G MK1 IEC 62288 Ed.2.0 Clause 4&7
384	435251	A	Report: Kongsberg Maritime, Type Approval System Test Report for Display 27" FHD ECDIS G MK1 IEC 62288 Ed.2.0 Clause 4&7
383	331201r00	2017-09-29	Report: Nemko, Display performance test report for DuraMON 32 Glass
382	6P08031	2016-12-14	Report: SP, Type Approval test report for DuraMON 27 Glass

Job Id: **262.1-012702-11**
 Certificate No: **TAA00000FJ**
 Revision No: **6**

DNV GL No	Document ID	Rev.	Description
380	P17-0030-1	2017-06-29	Report: SP, Type Approval test report for DuraMON 32 Glass
368	422928	D	Manual: Kongsberg Maritime, Display MDxx ECDIS, Instruction Manual
367	TL16112	2016-11-11	Report: MS Testing, EMC and environmental test report for MP5810 PC (Intel Core i3)
364	TAA000006K	3	Certificate: DNV GL, Type Approval certificate for Moxa EDS series switches
363	396312	C	Manual: Kongsberg Maritime, K-Master FWD Bridge Server Cabinet, Net B, Maintenance Manual
362	393278	C	Manual: Kongsberg Maritime, K-Master FWD Bridge Server Cabinet, Net A, Maintenance Manual
358	20885	0	Report: Applica, EMC and environmental test report of HD 27T22 MEC-CGU-AIBR Maritime Multi Computer
357	20941	0	Report: Applica, EMC and environmental test report of HD 27T22 MEC-CGU-xABR Maritime Multi Computer
356	425853	A	Report: Kongsberg Maritime, Hardware Compatibility Endurance Test report for K-Nav HD27T22 Panel PC
344	2013-3135	0	Report: DNV, EMC and environmental testing of Maritime Computer HT B22GE STC-C4K-M100
318	DOC205812-1	02	Report: Hatteland, IEC62288 flicker test report for HD27T22 MMC
316	TL15049	3	Report: MS Testing, Environmental test report for MP5810 PC-Setup 2
315	TL15048	3	Report: MS Testing, Environmental test report for MP5810 PC-Setup 1
314	TAA00000FC	1	Certificate: DNV GL, Type Approval certificate for CE-HW-01 & CE-HW-03 Maritime Fanless Computer
310	401014	B	Manual: Kongsberg Maritime, KM05 K-Bridge OS-650-NAV Operator Station, Installation Manual
309	400793	B	Manual: Kongsberg Maritime, KM05 K-Bridge OS-650-NAV Operator Station, Maintenance Manual
305	DOC102374-1	2	Report: Hatteland, DeltaE Appendix to DOC101832-6, Conformance test report HD 26T21 MMD-MA4-FOGA-HW04
304	DOC102381-1	1	Report: Hatteland, DeltaE Appendix to DOC101094-3, Conformance test report 27T11+HTC01
303	418200	A	Report: Kongsberg Maritime, K-Bridge & K-Nav Radar and ECDIS Image transfer to VDR
301	421040	A	Report: Kongsberg Maritime, IEC 62288 test report for HD26T21 display
300	419851	A	Report: Kongsberg Maritime, IEC 62288 test report for HD27T22 MEC panel computer
299	419849	A	Report: Kongsberg Maritime, IEC 62288 test report for MD24 ECDIS Glass display
298	419848	A	Report: Kongsberg Maritime, IEC 62288 test report for MD26 MK4 16:10 display
297	DOC102332-1	01	Report: Hatteland, Minimum brightness test of display control panel for HD 27T22 MEC-CGU-AABR
294	319321	01	Report: Nemko, IEC 62288 (2014) test report for ISIC DuraMON 27 Classic and 27 Glass
293	298985-5	2016-02-25	Report: Nemko, IEC 62288 (2014) test report for ISIC DuraMON 26 Classic

Job Id: **262.1-012702-11**
 Certificate No: **TAA00000FJ**
 Revision No: **6**

DNV GL No	Document ID	Rev.	Description
292	5P05962	1	Report: SP, EMC and environmental testing of ISIC DuraMON 24 Glass, DuraMON 26, DuraMON 26 Glass, DuraMON 19 Glass and DuraMON 27 displays
290	298985-2.01	2016-07-13	Report: Nemko, IEC 62288 (2014) test report for ISIC DuraMON 24 Glass
289	2008-3464	2	Report: DNV, EMC and environmental testing of JH 27T11 MMD-AA1-AABA
288	DOC101094-3	1	Report: Hatteland Display, Conformance test report JH27T11MMD-AA1-AABA with HTC01 computer
286	DOC102331-1	1	Report: Hatteland Display, Conformance test report HD 27T22 MEC-CGU-AABR
282	2014-20282	0	Report: Applica, EMC and environmental testing of HD 26T21 MMD-MA1-FOGA (HW04)
280	DOC101895-1	5	Report: Hatteland Display, Appendix IEC62288 HD 26T21
279	DOC101832-6	1	Report: Hatteland Display, Conformance test report for HD 26T21 MMD-MA4-FOGA (HW04)
278	3FO16798	A	Report: SP, IP protection tests for Pointer Carrier Panel (PCP)
273	E12103.01	2012-10-22	Report: Nemko, EMC and environmental test report for KM Touchpad Large, Heading wheel and Joystick
272	T208006-8a	A	Report: Delta, EMC and environmental test report for E38-96A29D-E002 trackball
271	3P08182	2	Report: SP, EMC and environmental test report for PCP Pointer Carrier Panel
265	416662	A	Report: Kongsberg Maritime, Presentation testing, IEC 62288 (2014) K-Master 2.1.0
252	3P00307	2013-05-02	Report: SP, EMC and environmental test report for 24", 27" and 22" DuraMon WS monitors
245	05192-075 A	A	Manual: ISIC, User Reference manual for DuraMON19, 26 and 27
243	TL15050	3	Report: MS Testing, Environmental test report for MP5810 computer
242	TL15051	3	Report: MS Testing, Environmental test report for MP5810 PC (incl RIC2 Radar Interface Card)
224	391995	B	KM Statement, K-Master Pilot Chair test statement (K-Master Pilot Chairs).
223	391778	A	KM Statement, K-Master console test statement (KMX FWD Centre Console).
221	391780	A	Test Report: TI 3000-14-015548 Rev.- (K-Master Pilot Chair).
220	391795	A	Test Report: TI 3000-14-016343 Rev.- (KMX Medium-800 Console).
219	391796	A	Test Report: TI 3000-14-016067 Rev.- (KMX Pedestall 300).
218	DANAK-198195	1	Test Report: DELTA, Type Approval testing of KM Common Operator Panels (COP-05)
217	DANAK-1910979	1	Test Report: DELTA DANAK-1910979, Project no.: A506924-1 (COP-05 Input Panel)
210	387155	C	Maintenance Manual: K-Master Pilot Chair.
206	359344	I	Manual: Kongsberg Maritime, K-Master Server Cabinet (600x1600x600).
190	391977	B	Test Report: K-Bridge ECDIS with K-Master MDS and ISIC.
188	391976	B	Test Report: K-Master FWD Bridge Fallback Modes and Effects.
187	391979	B	Test Report: K-Bridge with K-Master TCP as Input Device.
164	326403	B	Hardware Module Description: Phoenix contact QUINT-PS/1AC/24DC/10.

Job Id: **262.1-012702-11**
Certificate No: **TAA00000FJ**
Revision No: **6**

DNV GL No	Document ID	Rev.	Description
142	TAA00000M0	3	Certificate: DNVGL, MIS-Modular Interfacing System (incl. VL66199)
129	370398	A	Test Report: Nemko no. E12059.00 (K-Master Bridge Chair)
106	368647	A	Test Report: DNV Report No. 2011-3416 (HD13T21 KMD-DR1-CORP)
104	357261	B	Test Report: Nemko no. E11024.03 (K-Master Panel System)
102			Drawing: K-Bridge DNV NAUT System Topology Model (1)
96	362307	G	Manual: K-Bridge (R-Bus) SINT Cabinet Maintenance Manual
95	361286	D	Manual: K-Bridge R-Bus SINT Cabinet Installation Manual
88	351743	B	Doc: Functional Design Description, K-Bridge Navigation System
83	385170	A	Report: System Test ARP - Arm rest panel
82	385169	A	Report: System Test K-Bridge NAUT
80	385171	A	Report: Type Examination Test Report K-ECDIS sensor interface
65	E12140.01	01	Report: Nemko, ECDIS Colour verification test report for ISIC MD 26 KM05 monitor
64	373032	2012-06-21	Report: Kongsberg, K-Bridge ECDIS with ISIC monitor verification test report
60	DNV-2012-05-14	2012-05-14	Report: DNV, Verification tests for K-Bridge SW 6.0 and R-BUS SINT
57	2010-08-0107	2008-04-14	Report: TI, Vibration test report of ELDON MAS 120830x KM01 cabinet
56	DANAK-198508	2007-10-17	Report: Delta, Environmental tests for RCU501, RSER200-4, RHUB200-5 and RMP200-8
55	DANAK-198696	2007-03-15	Report: Delta, Environmental testing of RMP420 and RDIOR420
53	DANAK-1911523	2011-08-19	Report: Delta, Environmental tests of RCU502
49	3010-05-0052	-	Report: TI, Environmental test of KM-05 operator station 650
42	69187		Report: NEMKO, IEC 60529 / EN 60529 testing
39			Report: NEMKO – Additional Information regarding report No 16562 & 16562002
35	309397		Report: K-Bridge Sensor Integrator – Time Latency Test
34	2006-3459	01	Report: DNV, IP22 Testing of Heading Wheel
33	2006-3460	01	Report: DNV, IP22 Testing of Tracker Ball
29	DANAK-198576		Report: DELTA, Vibration Testing of KM05 slim line with MS2040+305083
28	DANAK-198577		Report: DELTA, Vibration Testing of KM05 deep line with MS2040+305083
26	DANAK-198575		Report: DELTA, Vibration Testing of KM05 deep line with KM kit 603185
21	DELTA-A504697-1		Report: DELTA, Type Approval testing of SONF1DC24G-K and Indicating and reset panels