



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA21050M

**This is to certify** that the undernoted product(s) has/have been approved in accordance with the requirements specified in Chapter 1, Part 7 of “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use” and the relevant Society's Rules.

This certificate is issued to

Manufacturer: **Kongsberg Maritime AS**  
Place of Manufacturing: **Kirkegårdsveien 45, Carpus, P. O. Box 483, NO-3601 Kongsberg, Norway**  
**Bekkajordet 8, NO-3189 Horten, Norway**  
**Søndre Kullerød 1, NO-3241 Sandefjord, Norway**

Product description: **Dynamic Positioning Control System**  
**Position Mooring Control System**  
**Combined Dynamic Positioning and Position Mooring System**  
**Independent Joystick Control System**

Model: **K-Pos DP, K-Pos PM, K-Pos DPM, cJoy**

Approval No.: **11A015**

Valid until: **31 December 2021**

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 8 February 2021.

T. Shimada  
General Manager  
Machinery Department

Note: (1) : The certificate has been issued due to the addition of the components and the software version.

(2) : The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

# NIPPON KAIJI KYOKAI

Attached sheet -1/8 to the Certificate No. TA21050M

## Specification & documents:

1. Ratings : Power Supply 115/230V AC, (DP controller; 24V DC version available for cC-1)

2. Components and reference documents :

2.1 General information

- (1) Publishing History .....CDQM-0010\_Publishing\_History\_N3
- (2) Contents .....CDQM-0010\_WebDoc\_Content\_N3
- (3) K-Pos and cJoy Maintenance Manual .....CDQM-0010\_WebDoc\_Content\_N3
- (4) K-Pos DP and cJoy Maintenance Information .....TA-KPOS-2006-MI\_A
- (5) cJoy System Maintenance Information .....308634E

2.2 Product descriptions and Operator manuals

Components	Document No.	Remarks
K-Pos DP	301093B (Product description)	
	436094C, 436102B, 436103D, 436104A, 436106A, 436114A, 436111B, 436113B, 436115A, 436117C, 436118C, 436110A, 436107B, 436108E/F, 436109C, 436120A, 436112A, 441048B, 441472C, 436119C	DP Basis 8.4.2 (8.4.x)
K-Pos PM	301094B (Product description)	
	436096C	DP Basis 8.4.2 (8.4.x)
K-Pos DPM	301094B (Product description)	
	436095C	DP Basis 8.4.2 (8.4.x)
cJoy	177332F (Product description)	
	436099B, 436098B, 436105B	DP Basis 8.4.2 (8.4.x)
cWing	436100A	DP Basis 8.4.2 (8.4.x)

2.3 Documents of Operator Stations with WS (Widescreen) display

Components	Document No.	Remarks
MC330 Computer [ThinkStation P330 Tiny] and Peripherals	[Computer] 450174B, 457749B, 459233B, 459234B	NK Approval No.19A046
	[Peripherals / Adapters] 463286A, 463283A, 463242A, 421168D, 464068A, 464069A, 463482A, 463483A	
KM18	430120E, 450167B, 450176B, 450177A	
KM05	450347A	
Power Distribution	450169C, 436716B, 463521A	
Operator Panel Systems	450171E, 444002B	
Display	450173B	

- To be continued -

# NIPPON KAIJI KYOKAI

Attached sheet -2/8 to the Certificate No. TA21050M

## 2.4 Documents of Controllers

### 2.4.1 Documents of Controllers

Components	Document No.	Remarks
cC-1 (cC: Compact Controller)	303999N	
DPC-1 (DPC: Dynamic Positioning Controller)	303996H, 302199B	
DPC-2 (DPC: Dynamic Positioning Controller)	303997L, 302199B	
DPC-3 (DPC: Dynamic Positioning Controller)	303998K, 302152B	

### 2.4.2 Documents of DP controllers (Interface manual)

Components	Document No.	Remarks
K-Pos	300967F	
K-Pos Serial Lines	300966D	
RIO200 Based Systems	300968C	
Standard RIO200 Loop Typicals	300970B	

- To be continued -

## 2.5 Hardware Module Descriptions

Components		Document No.	Remarks
Converter modules	CAN2DP	301505A	
	Moxa NPort 5200 Serial Device Servers	318636C	
HMI modules	cJoy Operator Terminal MK3	399517C	
	cWing Wing Terminal	178006F	
	COP-05 ALC Panel	300977B	
	COP-05 BU-DP Panel	300983B	
	COP-05 BU-TC Panel	301025B	
	COP-05 Input Panel	300984D	
	COP-05 Heading Wheel Panel	300985B	
	COP-05 Joystick Panel (Kwant Controls KC 06-K)	307003B	
	COP-05 Standalone Trackball	338386A	
	Display 27" FHD ECDIS G/GT MK2	445079A	
	Display 27" FHD ECDIS KM05 MK4	445069A	
	Display 27" FHD ECDIS S MK4	445067B	
	Display 32" FHD ECDIS MK1	404731A	
	Display 55" UHD ECDIS MK1	404720A	
Junction boxes	cJoy Operator Terminal Junction Box MK3	400360C	
	cWing Junction Box for Wing Terminal	178007F	
Network modules	Moxa EtherDevice Switch EDS-316	352676C	
	Moxa 5-Port Unmanaged Ethernet Switch EDS-205A	343879B	
	Patch panel 4/8 port, CAT 6a Installation Manual	441847C	
	Patch panel 19" 24 port, CAT 6a	441843A	
	Moxa IKS-6726A/6728A Series	439059A	
	Moxa Port Interface IM-6700A Series	439061B	
	Moxa SFP modules	440212A	
	Cisco 890 Series Integrated Service Routers	417159C	
	Switch Cisco 2960	463194A	
	SFP 100Mb, 1310nm, MM, Cisco	466702A	
	SFP 10/100/1000Mb, RJ45, Cisco	466703A	
	SFP 1000Mb, 1310nm, SM/MM, Cisco	466704A	
	SFP 1000Mb, 850nm, MM, Cisco	466706A	
	SFP+ 10Gb, 850nm, MM, Cisco	466718A	
	SFP+ Copper cable, 1m, Cisco	466719A	
	SFP+ Opt. cable, 850nm, MM	466721A	
Power modules	Filter Schaffner FN2080	303533A	
	Meanwell DC/DC Converter SD-350B 24V/24V, 245W	178577A	
	Phoenix Contact QUINT-PS/1AC/24DC/10	326403B	
	PSU TRIO-PS-2G/1AC/24DC/5/B+D	449192A	
Remote I/O modules	RCU602	408644C	
	RHUB200-5	300994F	
	RMP201-8	330111C	
	RSER200-4	300993J	

## NIPPON KAIJI KYOKAI

Attached sheet -4/8 to the Certificate No. TA21050M

### 3. Software:

Software version: DP Basis release 8.4, update 2 onwards

Update Notes for DP Basis 8.4.2 (Document No. 451148A)

Patch Notes for DP Basis 8.4.2.3 (Document No. 466993A)

Patch Notes for DP Basis 8.4.2.4 (Document No. 469630A)

### 4. Test Report etc.:

KM-05 Operator Station (Deep Line)

(1) DELTA Test Report DANAK-198575 Project No. A504273-3 (307741A)

(2) DELTA Test Report DANAK-198577 Project No. A504327-2 (308039A)

KM18 Console Range

(1) KM18 Console Range, Environmental test summary (445161B)

(2) Test Report: Nemko E17254.00 (EMC) (KM18) (428578A)

KM Common Operator Panels 2005 (COP-05)

(1) DELTA Test Report DANAK-198195Rev.1 Project No. A503298-1 (15 June 2007)(A503298-1\_1)

\* (2) Environmental Testing of Joystic Type KM-MOD, Lilaas AS, Tech. Report DNV:

Report No. 2006-3293 Rev.1 (2006-3293\_01)

(3) Environmental Test Report Joystick KC 06 Thales Doc. Ident. 9501 029 033XX 001 (22-11-2006)

(4) DELTA Test Report DANAK-1910612Rev.B Project No. A506311-1 (KM338108)

(5) DELTA Test Report DANAK-1910979 Project No. A506924-1 (13 July 2010)

Note: \* Previous or EOL associated HW.

MC330 (ThinkStation P330 Tiny)

(1) NK Approval No.19A046

—Associated adapters, part 1

(1) Test Report: Nemko no. E19179.01, Computer Adapters

—Additional adapters, part 2

(1) Test Report: Nemko no. E20096.02 (order no. 398223), Computer Adapters

—Additional associated adapters

(1) Certificate No. MRA000002D (EU-RO-MR-TA-Certificate that include accessories «HT 00262 OPT-A1» and «HT00263 OPT-A1»)

- To be continued -

## NIPPON KAIJI KYOKAI

Attached sheet -5/8 to the Certificate No. TA21050M

### 4. Test Report etc.:

Display 27" FHD ECDIS S MK4, Display 27" FHD ECDIS KM05 MK4

(1) Certificate No. MRA000000S Rev.2 (EU-RO-MR-TA-Certificate)

Display 27"/32" FHD ECDIS G MK1

(1) Certificate No. MRA000000H Rev.4 (EU-RO-MR-TA-Certificate for DuraMON 27 GLASS and DuraMON 32 GLASS)

Display 27" FHD ECDIS G MK2

(1) Certificate No. MRA000000H Rev.4 (EU-RO-MR-TA-Certificate for DuraMON 27 GLASS)

Display 55" UHD ECDIS G MK1

(1) Certificate No. MRA000001B (EU-RO-MR-TA-Certificate for DuraMON 55 GLASS)

DP Controller

(1) DELTA Test Report DANAK-198307 Rev.1 Project No. A503711 (3 April 2006)

(2) Verification Test of FS120, NDU and NDU Mini, Report No. 310-03-0319 (KM1001823B)

RSER200-4, RHUB200-5

(1) DELTA Test Report DANAK-198508 Project No. A503547-1 (17 October 2006)

RCU602

(1) Test Report: Nemko no. E15165.01 (RCU602 and RMC-ST)

RMP201-8

(1) Environmental tests for RMP201-8 based upon RMP200-8 (332991A)

Moxa NPort 5200 Serial Device Servers

(1) Certificate No. TAA000006T Rev.2

cJoy OT MK 3 (for MS WIN7 / WIN10)

(1) Test Report: TI 3000-14-018241 Rev.- (cJoy Operator Terminal MK3 WIN7)

**- To be continued -**

4. Test Report etc.:

cWing

- (1) Environmental Verification Test cWing and cJoy Report No. 310-04-0125A (16.03.05)
- (2) NEMKO Test Report – EN60945, Corrosion Test (cWing) (32743\_1)
- Additional Tests related to IEC 60945 (8.2, 8.4, 10.3 and 10.4)
  - (1) Environmental Test cJoy, cPos & cWing Functional Test Procedure (179130B)
  - (2) Environmental Verification Test, Additional Tests on cWing, cJoy, cPos (3010-05-0121)
  - (3) NEMKO Test Report – Electromagnetic Compatibility (cJoy/cPos/cWing) (41813Rev.1)
- Test for CAN2DP Converter
  - (1) DELTA Test Report DANAK-198632 Project No. A503547-4 (309493A)
- Additional Tests for cJoy (MK 1/2) and cWing
  - (1) NEMKO Test Report – Report No. E09815.03 (140487\_TRF\_MAR\_rev3)

Alarm Printer

- Canon LBP623Cdw (KM version for bridge)
  - (1) Test Report: NEMKO Order no. 379788 (EMC; Canon LBP623Cdw)
- OKI ML 1190 ECO (KM version for bridge)
  - (1) Test Report: NEMKO Order no. 378649-3 (EMC; OKI ML 1190 ECO)
- OKI ML 280 ECO (KM version for bridge)
  - (1) Test Report: NEMKO Order no. 378649-2 (EMC; OKI ML 280 ECO)

Screen Capture Printer

- Canon LBP623Cdw (KM version for bridge)
  - (1) Test Report: NEMKO Order no. 379788 (EMC; Canon LBP623Cdw)

Network Switch

- Cisco 2960 Switch (for NDU)
  - (1) Test Report: MS Testing, TL20007, CISCO WS-C2960L-24TS-LL V02 Switch
  - (2) Test Report: MS Testing, TL20006, CISCO WS-C2960L-24TQ-LL V01 Switch
- Moxa Ethernet Switch IKS-6728A-4GTXSFP-HV-HV-T (+ interfaces and modules)
  - (1) Test Report: MS Testing, TL15055 Issue 5 (Moxa, Managed Ethernet Switch)
- Moxa EtherDevice(TM) Switches (including EDS-316)
  - (1) Certificate No. TAA000006K Rev.3 Moxa EtherDevice(TM) Switches
- Moxa Ethernet Switches (including EDS-205A)
  - (1) Certificate No. TAA000021N, Moxa Ethernet Switches

# NIPPON KAIJI KYOKAI

Attached sheet -7/8 to the Certificate No. TA21050M

## 4. Test Report etc.:

Network Routers (K-IMS)

—Cisco 892FSP

(1) Certificate No. A-14276, Cisco 892FSP

(2) Certificate No. TAA00002R1, Cisco 892FSP

—Cisco 891-24X

(1) Certificate No. TAA00002ME, Cisco 891-24X

Power Supply

—Phoenix Contact QUINT-PS (including QUINT-PS/1AC/24DC/10)

(1) NK Approval No.08A039

—Phoenix Contact TRIO-PS-2G (including TRIO-PS-2G/1AC/24DC/5/B+D)

(1) Certificate No. TAA00000BM Rev.4, TRIO-PS-2G Series

HARDWARE LIST

—K-Pos, TA HW list for 1001-N3 (448540D)

FMEA

—K-Pos Basis FMEA, Based on ERZA H-170 (308977A)

OTHERS

(1) K-Pos Type Approval, Functional Test Report, Doc. No. 1012070b (23 Jan. 07)

- To be continued -



NIPPON KAIJI KYOKAI

Attached sheet -8/8 to the Certificate No. TA21050M

**Test items & approval conditions:**

1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS		Mark
External examination		X
Operation test and performance test		X
Electric power supply failure test		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		--
Dry heat test (Temperature 70°C × 16 hours)		X
Damp heat test		X
Vibration test (Acceleration ±0.7g × 1.5 hours)		X
Inclination test (Note 1)		X
Cold test (Note 2) (Temperature -15°C x 10 hours)		X
Salt mist test (Note 3)		X
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test		X
Conducted emission test		X
Flame retardant test		--

Note 1 : For MC 330 (ThinkStation P330 Tiny)

Note 2 : Cold test for “cWing” was carried out at -25°C x 16 hours.

Note 3 : Salt mist test was carried out for “cWing”.

2. Approval condition :

The products except cWing are not allowed to be installed on open decks.

- The End -