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LLOYD'S REGISTER TYPE APPROVAL SYSTEM, 2015.
Issued to:KONGSBERG MARITIME AS
**for: DYNAMIC POSITIONING CONTROL SYSTEM, POSITION MOORING
CONTROL SYSTEM AND INDEPENDENT JOYSTICK CONTROL SYSTEM
Type: KONGSBERG K-Pos DP, K-Pos PM, K-Pos DPM, cJoy, K-Master
TYPE APPROVAL CERTIFICATE No. 13/00047(E1)**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System, 2015 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

LR Approval Services – Request for Quotation	07.Feb.2007
LR Request for Marine Services	04.May.2007
Kongsberg Request for Marine Services; Type Approval of "DP" SvSo/LR-K-Pos, QA-ark. 441	04.May.2007
Email from LR Oslo, Helga Roed regarding use of 2010 production survey report.	25.Apr.2013
Inspection and Surveillance of Production Facilities report	21.Oct.2010
CDQM-0010 - TA-KPOS-2006 - PUBLISHING HISTORY Rev. F	17.Apr.2013
Kongsberg Maritime - Web User Documentation Project Number: 1001-F Vessel Name: CDQM-0010 Rev F - TA-KPOS-2006	18.Apr.2013
CDQM-0010 TA-KPOS-2006 Publishing history Rev K	31-08-2016
CDQM-0010 Rev K TA-KPOS-2006 Web documents	31 Aug 2016
NEMKO NS-EN ISO 9001:2008 Certificate, Number 900662	2014-04-09
NEMKO Certification document Number 900662	2014-04-09
Production Quality Assessment Form Control number OSL1500260	20/05/2015
Data Response 60945-Corrosion Waiver CE-HW-01 Letter 415544A	13-06-2016
ISIC Product Declaration Letter for DuraMON XX & DuraMON xx Glass, 415547A	13 Jun 2016

DATA SHEETS

SA91 Operator Station Upgrade Kit K-Pos/K-Chief/General Installation Procedure 406429B	Jun 2016
SA91 Operator Station K-Pos/K-Chief/General Maintenance Manual 406430B	Jun 2016
SN96 Operator Station Upgrade Kit K-Pos/K-Chief/General Installation Procedure 403685C	Jun 2016
SN96/KS01/KS03/KM04 Built-In Operator Station K-Pos/K-Chief/General Maintenance Manual 404320C	Jun 2016
SN96 Operator Station K-Pos/K-Chief/General Maintenance Manual 403861C	Jun 2016
SN96,KS01,KS03 and KM04 Built-In OS Upgrade Kit K-Pos/K-Chief/General Installation Procedure 403688C	Jun 2016
KNC620 Operator Station Upgrade Kit K-Pos/K-Chief/General Installation Procedure 403686C	Jun 2016
KNC620 Operator Station K-Pos/K-Chief/General Maintenance Manual 404318C	Jun 2016
KS01/KS03/KM04 Operator Station Upgrade Kit K-Pos/K-Chief/General Installation Procedure 403687C	Jun 2016
KS01/KS03/KM04 Operator Station K-Pos/K-Chief/General Maintenance Manual 404319C	Jun 2016
391204/A USB Extender VL-66199-T/R Hardware module Description	Mar 2014
389473/C ADP702 K-POS MK3 Operator Station Maintenance Manual	May 2016

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389472/C ADP702 K-POS MK3 OS Upgrade Kit for ADP702 OS Installation Procedure	May 2016
389471/C ADP701 K-POS MK3 OS Upgrade Kit for ADP701 OS Installation Procedure	May 2016
389470/C ADP701 K-POS MK3 Operator Station Maintenance Manual	May 2016
389192/B COP05 OS-555 Built-in WS MK3 Operator Station Maintenance Manual	May 2016
389191/C KM05 OS-650 DL WS MK3 Operator Station Maintenance Manual	May 2016
389190/C KM05 OS-650 SL WS MK3 Operator Station Maintenance Manual	May 2016
388688/C Panel PC 8" 1.66 GHz HD 08T21 Hardware Module Description	Mar 2015
406444D MP5810 Maintenance Manual	Jun 2016
407741B MP5810 Computer Backup/Restore and Windows 7/Windows XP Installation Procedure	Jun 2016
387729/H MP8200/MP8300 Backup/Restore and Windows 7 Installation Procedure	Oct 2015
387155/C K-Master Pilot Chair Maintenance Manual	Mar 2014
386896/E MP8300 Maintenance Manual	Feb 2016
406924A Release Notes DP Basis 8.3.0 K-Pos	06-07-2016
407271A K-Pos DP Dynamic Positioning System Operator Manual Release 8.3	Jul 2016
407273A K-Pos DPM Dynamic Positioning and Position Mooring System Operator Manual Release 8.3	Jul 2016
407274A K-Pos PM Position Mooring System Operator Manual Release 8.3	Jul 2016
407276A cJoy DP-OT Remote DP Operator Terminal Operator Manual Release 8.3	Jul 2016
407277A cJoy OT Joystick System Operator Manual Release 8.3	Jul 2016
407278A cJoy WT Remote Wing Terminal Operator Manual Release 8.3	Jul 2016
407281A K-Pos Auto Track Mode Operator Manual Release 8.3	Jul 2016
407282A K-Pos Follow Target Mode Operator Manual Release 8.3	Jul 2016
407284A K-Pos Seismic Track Mode Operator Manual Release 8.3	Jul 2016
407286A cJoy Seismic Track Mode Operator Manual Release 8.3	Jul 2016
407287A K-Pos Track Line Mode Operator Manual Release 8.3	Jul 2016
407289A K-Pos Offshore Loading Application Operator Manual Release 8.3	Aug 2016
407292A K-Pos Alternative DP System Operator Manual Release 8.3	Jul 2016
407293A K-Pos Backup DP System Operator Manual Release 8.3	Jul 2016
407295A K-Pos DP Capability and Motion Prediction Analysis Operator Manual Release 8.3	Jul 2016
407297A K-Pos Chart Server Application Operator Manual Release 8.3	Jul 2016
407298A K-Pos DP Recorder Operator Manual Release 8.3	Jul 2016
407300A K-Pos Built-in Simulator Operator Manual Release 8.3	Jul 2016
407301A K-Pos Stand-alone Simulator Operator Manual Release 8.3	Jul 2016
384633/A Display LCD MD22/24/27 MK2 Hardware Module Description	Jun 2013
384621/A Display 27" LCD MD27 KM05 MK2 Hardware Module Description	Jun 2013
371981/D Desktop Operator Station Maintenance Manual	May 2016
348026/A K-Master Utility Panel Hardware Module Description	Feb 2011
K-Pos, cPos and cJoy Maintenance Manual, TA-KPOS-2006, Cover and Contents TA-KPOS-2006-MM-CC_V	July 2016
K-Pos DP and cJoy Maintenance Information TA-KPOS-2006-MI_A	Dec.2006
cPos and cJoy Maintenance Information TA-CPOS-2006-MI_A	Dec.2006
cJoy System Maintenance Information 308634C	May 2015
MP8200 Maintenance Manual 366813c	Apr.2013
cC-1 Maintenance Manual 303999L	Feb.2016
DPC-1 Maintenance Manual 303996G	Feb.2016
DPC-2 Maintenance Manual 303997K	Feb.2016
DPC-3 Maintenance Manual 303998J	Feb.2016
CAN2DP, Hardware Module Description 301505a	Dec.2006

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cJoy Operator Terminal Junction Box MK3 Hardware Module Description 400360C	May 2015
cWing Wing Terminal Hardware Module Description 178006F	May 2015
cJoy Operator Terminal Mk3 WIN7 Hardware Module Description 399517/A	March 2015
COP-05 ALC Panel Hardware Module Description 300977b	Oct.2006
COP-05 BU-DP Panel Hardware Module Description 300983b	Jan.2007
COP-05 BU-TC Panel Hardware Module Description 301025b	Jun.2007
COP-05 Input Panel Hardware Module Description 300984d	Oct.2009
COP-05 Heading Wheel Panel Hardware Module Description 300985b	Jan.2007
Kwant Controls KC 06-K Joysticks Hardware Module Description 307003B	Jul.2011
COP-05 Standalone Trackball Hardware Module Description 338386a	Sep.2009
Monitor 27.0" TFT, JH27T11 MMD-AA1-XXXX Hardware Module Description 340315C	Sep.2012
cWing Junction Box for Wing Terminal Hardware Module Description 178007F	May.2015
Moxa EtherDevice Switch EDS-316 Hardware Module Description 352676a	Nov.2010
Moxa 5-Port Unmanaged Ethernet Switch EDS-205A Hardware Module Description 343879a	Feb.2010
Telesafe Mini Patch Boxes Hardware Module Description 177936a	03.Jun.2004
HP X110 100M SFP LC LX Transceiver Hardware Module Description 376523B	Jan 2014
HP X110 100M SFP LC FX Transceiver Hardware Module Description 376524C	Jan 2014
SFP Copper Transceiver Hardware Module Description 379581A	Jan 2013
HP 3600 El. V2 Switch Series Setup Procedure 376532C	Jun 2013
HP 3600-24 v2 El Switch Hardware Module Description 376528B	Jun.2014
HP 3600-24-SFP v2 El Switch Hardware Module Description 376529B	Jun.2014
HP X120 SFP LC Transceiver Module Hardware Module Description 380656A	Feb 2013
HP X120 1G SFP RJ45 T Transceiver Hardware Module Description 376525A	Nov 2012
Filter Schaffner, FN 2080 Hardware Module Description 303533a	Nov.2006
Meanwell DC/DC Converter SD-350B 24V/24V, 245W Hardware Module Description 178577a	22.Nov.2004
Phoenix Contact QUINT-PS/1AC/24DC/10 Hardware Module Description 326403b	Jun.2009
Display MD26 16:10 ECDIS MK4 Hardware Module Description 409543B	Jul 2016
RCU502 Hardware Module Description 358190G	May.2016
RCU602 Hardware Module Description 408644A	Mar 2016
RHUB200-5 Hardware Module Description 300994D	Jun.2014
RMP200-8 Hardware Module Description 300992b	Jun.2007
RMP201-8 Hardware Module Description 330111C	Oct.2011
RSER200-4 Hardware Module Description 300993G	June.2016
DPC-11 K-Pos Upgrade Kit for DPC-11 Mounting Procedure 320343C	Feb.2016
DPC-11 K-Pos DP Controller Maintenance Manual 324151F	Feb.2016
DPC-21 K-Pos Upgrade Kit for DPC-21 Mounting Procedure 320371C	Feb.2016
DPC-21 K-Pos DP Controller Maintenance Manual 324150F	Feb.2016
K-Master Server Cabinet (600x1600x600) Maintenance Manual 359344H	Apr.2016
K-Master FWD Bridge Workstation Maintenance Manual 398064B	Apr 2016
K-Master FWD Bridge Server Cabinet, Net A Maintenance Manual 393278B	Apr 2016
K-Master FWD Bridge Server Cabinet, Net B Maintenance Manual 396312 B	Apr 2016
K-Master Operator Manual Release 2.1.0, 412964A	Jul 2016
Rittal Fan w/ Filter SK3239.1XX Hardware Module Description 323480b	Feb.2013
K-Master Workstation Maintenance Manual 349893I	Apr.2016
K-Master Alarm Panel Hardware Module Description 348019b	Feb.2012
K-Master Chair Control Panel Hardware Module Description 348023b	Mar.2012
K-Master I/O Controller Hardware Module Description 348029a	Jan.2011

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K-Master Matrix MXE-5104 Computer Hardware Module Description 349892a	Feb.2011
K-Master Touch Control Panel 13.3" HD 13T21 KMD-DR1-CORx Hardware Module Description 349793d	Jun.2012
K-Master DP and IJS Joystick Hardware Module Description 348031a	Feb.2011
K-Master DP Joystick Hardware Module Description 348032b	Mar.2011
K-Master Heading Wheel Hardware Module Description 348024a	Jan.2011
K-Master IJS Joystick Hardware Module Description 358656a	Sep.2011
K-Pos Interface Manual, Cover and Contents 300967E	July.2016
K-Pos Serial Lines, Interface Specification 300966C	July.2016
RIO200 Based Systems, Interface Requirement 300968C	July.2016
Standard RIO200 Loop Typicals 300970B	July 2016
Kongsberg K-Pos DP, Dynamic Positioning System Product Description 301093b	Feb.2006
Kongsberg cJoy and cPos, Compact Joystick and DP Control Systems Product Description 177332f	May.2010
Kongsberg K-Pos DPM, Combined Dynamic Positioning and Position Mooring System Product Description 301094b	Feb.2006
Kongsberg K-Master Work Station Product Description 350434b	Apr.2012
Panel PC 7" 5:3 J1900 Hardware Module Description 405546B	Aug 2016
Computer NEO CE-HW-01 Hardware Module Description 409277A	May 2016

DRAWINGS

Layout Drawing OS-650 Console Complete OS-650 (KM-05) 1004153 Rev A	25.Apr.2005
General Arrangement, DPC-1/2 Cabinet 302199B	24.Oct.2006
General Arrangement, DPC-3 Cabinet 302152B	25.Oct.2006
Environmental Test, cJoy, cPos, cWing, Cable Layout drawing 508490A	16.Mar.2005

TEST REPORTS

E14200.00 NEMKO Test report Electromagnetic compatibility NEMKO order No 265317 Lexmark CS510de	2014-08-13
ENV Test report TL13130 Kongsberg MP8300 PC5	31 Jan 2014
EMC Test report TL13130 Kongsberg MP8300 PC5	30 Jan 2014
ENV Test report TL13075 Kongsberg MP8300 PC 4	21 Nov 2013
EMC Test report TL13075 Kongsberg MP8300 PC4	14 Nov 2013
ENV Test report TL13074 Kongsberg MP8300 PC 3	21 Nov 2013
EMC Test report TL13074 Kongsberg MP8300 PC 3	27 Nov 2013
ENV Test report TL1673 Issue3 HPA3600 Series Switch JG303A, JD102B-HPX115 Fibre Transmitter	26 Jun 2014
EMC Test report TL1673 Issue3 HPA3600 Series Switch JG303A, JD102B-HPX115 Fibre Transmitter	26 June 2014
ENV Test report TL1672 Issue3 HP A3600 Series Switch JG299A	26 June 2014
EMC Test report TL1672 Issue3 HP A3600 Series Switch JG299A	26 June 2014
SP 3P00307 Test report, 24", 27" & two 22" DuraMon WS Monitor	2013-05-02
DELTA Test report DANAK-1910979, project No A506924-1	13 Jul 2010
394658/A Environmental test statement K-Master 1 & 3 button joystick	11-06-14
391995/B K-Master pilot chair IEC60945 vibration& IP2X test statement	08-04-2014
391796/A Environmental test report KMX Pedestal-300	12-3-2014
391795/A Environmental test report KMX Medium-800 console	20-03-2014
391780/A Environmental test report K-Master Pilot Chair	12-03-2014
391778/A K-Master console test statement KMX FWD centre console	14-03-2014

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I/O Test Report 174026d_FTR	11.Jan.2007
K-Pos Type Approval, System Test Report, RBUS and RSER IO TA_FAT_DpIoSwTest_A_FTR	23.Jan.2007
Verification Test of KM-05 Operator Station - 650, TI Report No. 3010-05-0052 1010383A	02.May.2005
DELTA Test Report DANAK-198574, Project no.: A504273-2 307745A	04.Dec.2006
DELTA Test Report DANAK-198637, Project no.: A504352-1	30.Jan.2007
DELTA Test Report DANAK-198575, Project no.: A504273-3 307741A	04.Dec.2006
DELTA Test Report DANAK-198577, Project no.: A504327-2 308039A	04.Dec.2006
DELTA Test Report DANAK-198195, Project no.: A503298-1, Rev1	15.Jun.2007
Environmental Testing of Joystick Type KM-MOD, Lilaas AS, Tech. Report DNV Certification 2006-3293 Rev. 01	19.Oct.2006
Joystick KC 06, Environmental Test Report, Thales Doc. Ident. 9501 029 033XX 001	22.Nov.2006
NEMKO Test Report no. 69187 (IP22 test of COP-05 units: ALC, BU-NAV, Utility)	31.Aug.2006
DNV report 2006-3459 (IP22 test of COP-05 unit: Heading Wheel)	13.Oct.2006
DNV report 2006-3460 (IP22 test of COP-05 unit: Input Panel with Tracker Ball)	01.Nov.2006
DELTA Test Report DANAK-1910612Rev B, Project no.: A506311-1	15.Sep.2009
Test Report: Kongsberg MP8200 Personal Computer, Mariner Systems (UK) Ltd., TL1582-ENV Issue 01	16.Dec.2011
Test Report: Kongsberg MP8200 Personal Computer, Mariner Systems (UK) Ltd., TL1582-EMC	16.Dec.2011
Test Report: Kongsberg MP8200 Personal Computer, Mariner Systems (UK) Ltd., TL1583-ENV Issue 01	16.Dec.2011
Test Report: Kongsberg MP8200 Personal Computer, Mariner Systems (UK) Ltd., TL1583-EMC	16.Dec.2011
Mariner Systems statement (for TL1583 and TL1582) related to static and dynamic inclination test	undated
Test Report: TI 3010-09-0221 (Vibration Test Of K-Master Chair) 368683a	21.Jan.2010
KM Statement, K-Master Workstation, Vibration Test Statement 368822b	13.Mar.2012
Hatteland Statement 100984-13 for K-Master 13.3" and 8" TCPs 368641C	4 Feb 2015
Test Report: DNV Report No. 2011-3416 (HD13T21 KMD-DR1-CORP) 368647a	14.Oct.2011
Test Report: DNV Report No. 2010-3409 Data Response Norway, (MXE-5104 Maritime PC) 351381a	10.Sep.2010
Test Report: Nemko no. E11024.03 (K-Master Panel System) 357261b	07.May.2012
Test Report: Nemko no. E12059.00 (K-Master Bridge Chair) 370398a	07.May.2012
DELTA Test Report DANAK-198307, Project no.: A503711-1	03.Apr.2006
Verification Test of FS120, NDU and NDU Mini, TI Report No. 310-03-0319, Rev. No. A 1001823b	28.Oct.2004
DELTA Test Report DANAK-198508, Project no.: A503547-1 Rev1	17.Oct.2006
DELTA Test Report DANAK-1911523, Project no.: A507567	19.Aug.2011
KM clarification to Delta test report DANAK-1911523 related to "Topic: Insulation resistance test omitted on RCU502"	20.Mar.2013
Environmental tests for RMP201-8 based upon RMP200-8 332991a	16.Apr.2009
Environmental Verification Test, cWing and cJoy, TI Report No. 310-04-0125, Rev. A	16.Mar.2005
NEMKO Test Report No E15165.00, Remote Controller Unit/Fiber Converter for RBUS 383971A	2015-09-18
NEMKO Test Report - EN 60945, Corrosion Test (cWing), NEMKO Order No. 32743-Rev 1	06.Apr.2005
Compass Safe Distance Test of Joystick and DP Equipment, Test Report DNV Certification 2005-3115	01.Mar.2005
Environmental Test, cJoy, cPos & cWing, Functional Test Procedure 179130b	11.Apr.2005
Environmental Verification Test, Additional Tests on cWing, cJoy, cPos, TI Rpt No. 3010-05-0121	13.Apr.2005
NEMKO Test Report - Electromagnetic Compatibility (cJoy/ cPos/ cWing) 41813-1	12.Apr.2005
DELTA Test Report DANAK-198632, Project no.: A503547-4 309493a	26.Jan.2007
Test Report: NEMKO Order No. 140487 Rev 3 (cJoy / cWing)	30.Aug.2010
Environmental Test Report Qualification Test of cJoy Operator Terminal MK3 WIN 7 401595 A	23-03-2015

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NEMKO Test Report - Electromagnetic Compatibility (OKI ML280 ELITE) NEMKO Order No. 39760 1005166A	28.Feb.2005
Test Report Presentation Testing, IEC 62288 (2014) DP Basis 8.3.0, 416661A	06-07-2016
Test Report Presentation Testing, IEC 62288 (2014) K-Master 2.1.0, 416662A	06-07-2016
Test Report BAM Interface 416664A	4 July 2016
Test Report MOXA N Port5232-T Serial Line Converter 416665A	2016-06-18
Test Report: Applica Report No. 20468 (HD 08T21 KMC-DBG-LAQA with Cooling Fan AD0824MB-D71) ... 401536a	20 Jan 2015

CERTIFICATES

DNV-GL Type Approval Certificate MOXA Inc TAA000006K, 355997B	2015-11-10
DNV-GL Type Approval Certificate ISIC A/S TAA000005V, 385177B	2015-10-27
DNV-GL Type Approval Certificate MOXA Inc A-14041, 355982B	2014-12-04
DNV-GL Type Approval Certificate MOXA Inc TAA000006T Rev 1, 415730A	2016-02-03
DNV-GL Type Approval Certificate TAA00000FC Data Response Norge AS 415438A	2016-05-09
DNV-GL EU RO Mutual Recognition Type Approval Certificate MRA000000G ISIC A/S, 411528A	2016-02-10
DNV-GL EU RO Mutual Recognition Type Approval Certificate MRA000000R Data Respons Norge AS 415439A	2016-05-09
DNV-GL EU RO Mutual Recognition Type Approval Certificate MRA0000003 Rev1 for Hatteland Display AS 415821A	2015-09-17
DNV-GL MEDB000008G-Rev 1 EC-Type Examination Certificate (Module B) K-Pos HCS	2016-07-18
DNV-GL Type Approval Certificate No TAA000004C-Rev 1Kongsberg cPos, K-Pos DP/PM/DPM, cJoy	2016-08-23
GL Type Approval Certificate No 61 998-14 HH Veinland GmbH, 391923A	2014-03-26
Polski Rejestr Statkon Mutual Recognition Type Approval Certificate DuraPanel 7"(CP7) and DuraPanel 12,1"(CP12) Certificate No TE/2070/883236/15/MR 405864A	2015-08-18
DNV-GL QS-Certificate Of Assessment-EC (Mod D) No MEDD00000G3 for Kongsberg Maritime AS 20	16-07-18

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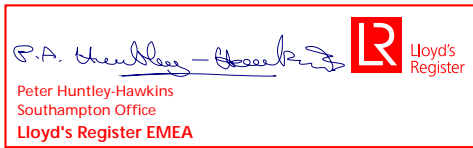| Date	Quote this reference on all future communications
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Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.

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LR031.1.2016.06

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