



Marine & Offshore
Division

Certificate number: 45056/A0 MED

File number: NAV 06/12577/01

Item number: MED/4.30

This certificate is not valid when presented without the full
attached schedule composed of 7 sections

www.veristar.com

Notified Body 2690 - MARINE EQUIPMENT DIRECTIVE 2014/90/EU

EC TYPE EXAMINATION CERTIFICATE

as per Module B of Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations and Commission Implementing Regulation (EU) 2017/306 of 06 Feb. 2017

This certificate is issued to:

TOKYO KEIKI INC. Marine Systems Company

Yaita - JAPAN

for the type of product

**ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEM (ECDIS) WITH
BACKUP, AND RASTER CHART DISPLAY SYSTEM (RCDS)**

Type: EC-8000/8500 series

Requirements:

SOLAS 74 Convention as amended, Regulations V/18, V/19, X/3

IMO Res. MSC.36(63) -(1994 HSC Code)- as amended, 13

IMO Res. MSC.97(73) -(2000 HSC Code)- as amended, 13

IMO Res. A.694(17)

IMO Res. MSC.191(79), MSC.232(82), MSC.302(87)

IMO SN.1/Circ.266

IEC 60945 (2002) + /Corr. 1 (2008),

IEC 61162 series: IEC 61162-1 ed4.0 (2010-11) - IEC 61162-2 ed1.0 (1998-09) - IEC 61162-3 ed1.2 Consol. with am1 ed. 1.0 (2010-11) and am2 ed. 1.0 (2014-07) - IEC 61162-450 ed1.0 (2011-06),

IEC 61174 Ed. 4.0 (2015),

IEC 62288 Ed. 2.0 (2014-07).

This certificate is issued on behalf of the French Maritime Authorities to attest that BUREAU VERITAS did undertake the relevant type-examination procedures for the product identified above which was found to comply with the relevant requirements of the Directive 2014/90/EU of the European Parliament and of the Council of 23 July 2014 as transposed in the French Regulations.


This certificate will expire on: 15 May 2022

For BUREAU VERITAS Notified Body 2690,

At BV KOBE, on 15 May 2017,

Shinichi Takemoto



This certificate does not allow to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark ) to the products corresponding to this type. To this end, the production-control phase module (D, E or F) of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a notified body.

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. BUREAU VERITAS is designated by the French Maritime Authority as a "notified body" under the terms of the French Regulations Division 140 Chapter 140-2. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Tokyo Keiki ECDIS EC-8000/8500, EC-8000K/8500K consist of:

- Tokyo Keiki ECDIS EC-8000/8500 deck stand
- Tokyo Keiki ECDIS EC-8000K/8500K console mount

1.1 Hardware modules:

#	Component	Type / Version
1	Control unit	drawings -18996287_ , -18992033_
2	Display unit	19inch LCD : JH 19T12 or JH 19T14 (EC-8000) 23.1inch LCD : JH 23T12 or JH 23T14 (EC-8500)
3	Operation unit	drawing -18996291_ or drawing 18996674_
4	Serial I/F unit	drawing -18996288_

1.2 Software:

#	Component	Type / Version
1	ECDIS	Ver.1.9.x
2	C-Map SDK	Ver.6.0.x
3	RCDS SDK	Ver.4.1.x
4	Presentation library	Ed.4.0
5	Operation unit AOP-001	Ver.2.x
6	Operation unit AOP-002	Ver.3.x
7	Operating System	Microsoft Windows XP Professional Embedded

2. DOCUMENTS AND DRAWINGS:

2.1 - Drawings: 189920143, 189920310, 189920320, 209990451, 189962930, 189962870, 189920330, 189920360, 189962910, 189962880, 189920280, 189963320, 189920250, 189920260, 189920270, 189963290, 189963300, 189963310, 189918200, 189918210, 189920301

2.2 - MED-B-9780 Certificate by DNV EC-81008600_IEC61174 Ed.3

2.3 - MED-B-7910 Certificate by DNV EC-80008500_IEC61174 Ed.3

2.4 - 00910-2004-AQ-KOB-JAB ISO9001_certificate

2.5 - Hardware Descriptions : CMRC-16-155 Hardware Specifications for EC-8000,8500, CMRC-16-155 HW spec_Drawings, CMRC-16-172 Change description EC-8000,8500 with VDR, DOC100732-12 Corrosion Statement - Hatteland Display, DOC101328-4 Series 1 JH xxTxx MMD - IEC 60945 & IACS E10 Statement, DOC102072-1r1 Statement of Manufacture Similarity for JH 19T14 TKD-AAE-AA..., DOC102073-1r1 Statement of Manufacture Similarity for JH 23T14 TKD-MAE-AA..., Date_05082015 Information from Hatteland display about IEC62288 Ed.1 and 2, eu-ro-mr_mra0000003, eu-ro-mr_mra0000003_date170920151200_310820201200, DOC100568-1 Tokyo Keiki Conformance test report of JH23T12 for use in ECDIS and RADAR, DOC100570-1 Tokyo Keiki Conformance test report of JH19T12 for use in ECDIS and RADAR, DOC100829-3 Flicker Test - JH23T12MMDAA1AAAA, 2008-3190 JH 19T12 MMD-AA1-AAAA Technical Report 2008-3190 Maritime rev 2, 2008-3143 JH 19T12 MMD-AA1-AAAC Technical Report 2008-3143 Maritime, 2008-3146 JH 19T12 MMD-DA1-AAAA Technical Report 2008-3146 Maritime, DOC100829-6 Flicker Test - JH23T14MMDMA1A0BA, DOC100829-15 Flicker Test - JH19T14 HW06, DOC100878-1 Tokyo Keiki Conformance test report 23T14, DOC101174-1 Conformance test report 19T14TKD_HW06, 2013-3038 JH 19T14 MMD-MA1-AAAA-60001 Technical report 2013-3038 Maritime rev 0, 2010-1681 JH 19T14 MMD-MA1-SABA Technical Report 2010-1681 Maritime rev 1, 2010-3124 JH 23T14 MMD-MA1-Axxx Technical Report 2010-3124 Maritime rev 3

2.6 Software Descriptions : CMRC-16-150 ECDIS ver.1.9.0 release note, CMRC-16-107 Webmanagement system report

2.7 Installation Instructions : CMRC-16-107 Operator Manual, CMRC-08-047 InstallationManual EC-8000,8500, CMRC-16-154 EC-8x00 Upgrading Manual, CMRC-16-143 EC-8x00 Service Menu Manual

2.8 - CMRC-16-458_Hardware Component List_EC-8000,8500_signed.

3. TEST REPORTS:

- 3.1 - CMRC-16-103 Agenda & memorandum of witness testing, CMRC-12-060 C-MAP Simulator User's Manual, CMRC-14-039 TCS Simulator Operator's Manual, CMRC-14-114 BAM Simulator 1.1 User's Manual, CMRC-14-145 VDR Simulator OperatorManual, DATE2008012 RDTSIM Instructions, CMRC-16-138 RRT simulator user manual, CMRC-16-173 Sentence simulator user manual
- 3.2 - CMRC-16-128 IEC61174 Ed.3_Test report_EC-8100,8600, EC-8000,8500 Dated 04-08/08/2014, CMRC-16-125 IEC61174 Ed.3 6.8.14 retest report_EC-8100,8600,EC-8000,8500 Dated 04-08/08/2014, CMRC-16-126 IEC61174 Ed.3_Annex_F_Test report_EC-8100,8600EC-8000,8500 Dated 04-08/08/2014, CMRC-16-158 IEC61174Ed.3_Annex_F_Test report_EC-8000-8500, CMRC-16-127 IEC61174 Ed.3_Annex_G_Test report_EC-8100,8600, EC-8000,8500 Dated 04-08/08/2014
- 3.3 - CMRC-16-121 IEC62288 Ed.1_Test report_EC-8100,8600,EC-8000,8500 Dated 04-08/08/2014, CMRC-16-122 IEC62288 Ed.2_Test report (Differences from Ed.1)_EC-8100,8600,EC-8000,8500 Dated 29/09-2014-01/10/2014, CMRC-14-206 IEC62288 Ed.2 Annex.A 1.6b_retest report_EC-8100,8600,EC-8000,8500 Dated 29/09-2014-01/10/2014
- 3.4 - CMRC-16-131 IEC62388 Ed.2 TT Scenario 1, 5_Test report_EC-8100,8600,EC-8000,8500 Dated 04-08/08/2014
- 3.5 - CMRC-16-132 IHO S63 Ed.1.1_Test report_EC-8100,8600,EC-8000,8500 Dated 04-08/08/2014
- 3.6 - CMRC-16-156 IEC61162-1Ed.3_Annex_B_Test report_EC-8000,8500 Dated 08-09/12/2008
- 3.7 - TKME1-15-E001-W1 IEC61162-2 CheckList_witness_EC-8500,PR-6000 Dated 20/06/2015
- 3.8 - 473S-08-DNV01 ENVIRONMENTAL TEST REPORT (ONLY WITNESS TEST ITEM) Dated 30-31/10/2014, CMRC-09-009 IEC 60945-7.2_Test report_EC-80008500 Dated 08-13/01/2009
- 3.9 - CMRC-16-133 Memorandum for type testing of EC-81008600 and EC-8000(-A)8500(-A) Dated 29/09-2014-01/10/2014
- 3.10 - CMRC-16-075 IEC61174 Ed.4_Test report_EC-8100,8600,EC-8000,8500 Dated 25/04/2016 ·27/05/2016 and witnessed by BV surveyor
- 3.11 - CMRC-16-076 S-64 Ed.3.0.1_Test report_EC-8100,8600,EC-8000,8500 Dated 25/04/2016 ·27/05/2016, Including S-64 Ed.3.0.1 Screenshot report and witnessed by BV surveyor
- 3.12 - CMRC-16-171 IEC62288 Ed.2_Test report_EC-8100,8600,EC-8000,8500 Dated 25-29/04/2016 and witnessed by BV surveyor
- 3.13 - CMRC-16-142 IEC61996-1 Ed.2 AnnexE&G_Test report_EC-8100,8600,EC-8000,8500 Dated 25-29/04/2016 and witnessed by BV surveyor
- 3.14 - CMRC-16-144 IEC61162-450 Ed.2_Test report_EC-8100,8600,EC-8000,8500 Dated 25-29/04/2016 and witnessed by BV surveyor
- 3.15 - CMRC-16-260_Test Report_IEC61162-450Ed_1+AMD1_EC-8100,8600,8000,8500 Dated 27-29/09/2016 and witnessed by BV surveyor
- 3.16 - CMRC-16-261_Test Report_IEC61162-1 Ed_4 AnnB(RRT)_EC-8100,8600,8000,8500 Dated 29/09/2016 and witnessed by BV surveyor
- 3.17 - CMRC-16-342_Test Report Checking the IHO S-52 Presentation Library Ed.4.0_EC-8000,8500,EC-8100,8600 Dated 19/10/2016 issued by TOKYO KEIKI INC.
- 3.18 - CMRC-17-095_Test Report Interface with NAVTEX EC-8100,8600,EC-8000,8500 Dated 04/04/2017 issued by TOKYO KEIKI INC. and witnessed by BV surveyor
- 3.19 - CMRC-17-105_Test Report_USB link and safe takeover EC-8000,8500 Dated 04/04/2017 issued by TOKYO KEIKI INC. and witnessed by BV surveyor.

4. APPLICATION / LIMITATION:

- 4.1 - As per requirements of Regulations stated on front page of this certificate.
- 4.2 - Only Hardware and Software successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer are covered by this certificate.
- 4.3 - A dual installation of ECDIS EC-8100, 8600, 8100K, 8600K, 8000, 8500, 8000K, 8500K complies with requirements for ECDIS with backup arrangement.

5. PRODUCTION SURVEY REQUIREMENTS:

This certificate alone does not allow the applicant to issue the Declaration of Conformity and to affix the mark of conformity (wheelmark) to the products corresponding to this type. To this end, the production-control phase module D "Production Quality Assurance" or E "Product Quality Assurance" or F "Product Verification" of Annex II of the Directive is to be complied with and controlled by a written inspection agreement with a Notified Body.

6. MARKING OF PRODUCT:

- 6.1 - Maker's name or trademark,
- Serial number of the units,
- Equipment type number or model identification under which it was type-tested,
- Minimum safe distance at which the equipment may be mounted from a standard and a steering magnetic compass.

6.2 - Reference is made to MED 2014/90/EU chapter 2.

In particular Article 10.3 specifies that the wheelmark shall be followed by the identification number of the Notified Body involved in the production control phase (module D, E or F) and by the year in which the mark is affixed (4 digits or last 2 digits).

6.3 - Alternatively, the marking may be presented on a display at equipment start-up.

6.4 - The title and version of each software element included in the installed software system shall be either marked or displayed on command on the equipment.

6.5 - When the marking and the title and version of the software are displayed only on the display, such information shall also be included in the equipment manual.

7. OTHERS:

It is **TOKYO KEIKI INC. Marine Systems Company** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*** END OF CERTIFICATE ***