

Subject

Implementation of Electronic Chart Display and Information System (ECDIS)

ClassNK

Technical Information

No. TEC-1129

Date 11 September 2017

To whom it may concern

ClassNK has informed the requirements related to the implementation of ECDIS by ClassNK Technical Information No. TEC-0907 issued on 22 June 2012.

After issuing of the Technical Information, ClassNK has informed relevant information on ECDIS by other Technical Information and/or "ECDIS News" on ClassNK homepage accordingly.

This time, ClassNK has reached to issue new ClassNK Technical Information No. TEC-1129 as the updated version of TEC-0907 referring to other relevant Technical Information.

The ClassNK Technical Information No. TEC-0907 is revoked by this Technical Information.

1. Applicable ships

The new requirements shall apply to the following ships engaged on international voyages:

- (1) Passenger ships of 500 GT and upwards;
- (2) Tanker* of 3,000 GT and upwards; and
- (3) New building cargo ships other than tanker of 3,000 GT and upward, and existing cargo ships other than tanker of 10,000 GT and upward.

* "Tanker" means a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of a flammable nature.

2. Applicable due date

The due date for ships to be fitted with ECDIS is as follows:

Definition of "constructed" is as per the paragraph 1 of SOLAS Chapter V/2.1.

(1) Passenger ship

- (i) Passenger ship constructed on or after 1 July 2012, not later than the initial safety equipment survey.
- (ii) Passenger ship constructed before 1 July 2012, not later than the first safety equipment survey on or after 1 July 2014.

(2) Tanker

- (i) Tanker constructed on or after 1 July 2012, not later than the initial safety equipment survey.
- (ii) Tanker constructed before 1 July 2012, not later than the first safety equipment survey on or after 1 July 2015.

(To be continued)

NOTES:

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- (3) Cargo ship other than tanker
- (i) Cargo ship, of 10,000 GT and upwards constructed on or after 1 July 2013, not later than the initial safety equipment survey.
 - (ii) Cargo ship, of 3,000 GT and upward but less than 10,000 GT constructed on or after 1 July 2014, not later than the initial safety equipment survey.
 - (iii) Cargo ship, of 50,000 GT and upward constructed before 1 July 2013, not later than the first safety equipment survey on or after 1 July 2016.
 - (iv) Cargo ship, of 20,000 GT and upward but less than 50,000 GT constructed before 1 July 2013, not later than the first safety equipment survey on or after 1 July 2017.
 - (v) Cargo ship, of 10,000 GT and upward but less than 20,000 GT constructed before 1 July 2013, not later than the first safety equipment survey on or after 1 July 2018.
- (4) Ship constructed under the conditions of above (1) (ii), (2) (ii), (3) (iii), (iv) and (v), but delivered after the applicable due date, not later than the initial safety equipment survey.
3. Type approval of ECDIS
- (1) Type of ECDIS shall be approved by the Administration or Organizations approved by the Administration.
 - (2) ECDIS shall comply with the requirements of IMO performance standards.
 - (i) ECDIS installed before 1 January 2009 shall be complied with the A.817(19), MSC.64(67) Annex 5 and MSC.86(70) Annex 4, and provided with latest IHO standard software and be able to display all information of latest Electronic Navigation Charts (ENC).
 - (ii) ECDIS installed on or after 1 January 2009 shall comply with the IMO resolution MSC.232(82), and provided with latest IHO standard software and be able to display all information of latest ENC.
 - (iii) Latest IEC 61174 test standards for ECDIS shall be applied.
ECDIS installed on or after 1 September 2017 shall comply with the IMO resolution MSC.232(82) and shall be of type-approved in accordance with IEC 61174 Edition 4.0.
4. Electronic Navigation Charts (ENC)
- (1) The ENC shall be issued by Hydro Offices authorized by Administration and made in accordance with the data bases of IHO standards.
 - (2) Ship shall be provided with all ENC for navigation areas of engaged voyages.
When ENC is not published and local charts requested by coastal states, ship shall be provided with paper charts appropriately or Raster Navigation Charts (RNC).
 - (3) All chart information and symbols shall be displayed on the ECDIS.
ENC database which conforms to the latest IHO standards are to be used. IHO has announced a revision of IHO standards as below, effective from 1 September 2017.

Standards	Current	Revised
Specifications for Chart content and display aspects of ECDIS	S-52 Ed.6.0	S-52 Ed.6.1.0
Presentation Library (PL)	Ed.3.4	Ed.4.0
Test Data Sets	S-64 Ed.2.0.0	S-64 Ed.3.0

(To be continued)

- (4) Company should instruct their ships about the procedures of chart inventory and updating for ENC in accordance with the ISM Code.
 - (5) Latest information for ENC may be obtained from IHO web site.
5. Guidance for ECDIS installation
- (1) General:
 - (i) ECDIS shall be supplied by an emergency source of electrical power;
 - (ii) ECDIS is required to connect to Radar (video and ARPA information) and AIS as well as gyro compass, speed log and GPS receiver. This requirement is recommended to ECDIS for existing ships as far as practicable. Other navigation/radio equipment may be connected to ECDIS if the digital interfaces are available.
Please also refer to the ClassNK Technical Information TEC-0912 for displaying Radar video ;
 - (iii) ECDIS software should be updated by the manufacturer's information or manuals; and
 - (iv) When ships, not mandatory to be fitted with ECDIS, have ECDIS for navigation, ship should observe the instructions by the Flag State.
 - (2) Main ECDIS:
 - (i) Main ECDIS shall be located in the area of wheelhouse forwards any curtain; and
 - (ii) Main ECDIS is required to arrange an appropriate back-up. Back-up ECDIS prescribed on the type approval certificate of main ECDIS, or appropriate nautical charts are acceptable as a back-up arrangement for ECDIS.
 - (3) Back-up ECDIS:
 - (i) Back-up ECDIS combined with radar function cannot replace the mandatory radar required by Chapter V of SOLAS;
 - (ii) Back-up ECDIS may be located anywhere in the wheelhouse, such a chart space;
 - (iii) Operations of equipment shall be same as main ECDIS;
 - (iv) Navigational information of main ECDIS shall be relayed to back-up ECDIS;
 - (v) Electrical power supply of the back-up ECDIS should be separated from electrical power supply of the main ECDIS;
 - (vi) Connection cables to gyro compass, speed log and GPS receiver shall be separated from connection cables for the main ECDIS; and
 - (vii) Connection cable for interface between main ECDIS and back-up ECDIS shall be provided.
 - (4) Treatment of TCS using ECDIS connected to Auto pilot (HCS)
 - (i) When TCS is installed on board the ship, the operation test on the sea trial shall be required. When TCS has been installed on board the existing ship, the drawings of installation and operation test procedures should be submitted to ClassNK Material and Equipment Department. After plan approval, the operation test at sea shall be performed with attendance of ClassNK Surveyor.
 - (ii) A back-up navigator alarm shall be located in the captain room. This alarm may be connected to the BNWAS on board.

(To be continued)

6. ECDIS training

- (1) In the STCW 2010 amendment and related circulars, Master and Deck Officers on board the ship equipped ECDIS are required to complete Generic Training (comply with IMO Training Course (IMO Model Course 1.27)) by 1st January 2017, as a condition to obtain or renew their certificates of competency.
- (2) It has been clarified by STCW.7/Circ.24 that the seafarers are not required to provide documentation of Generic and Type-specific Training in ECDIS. On the other hand, the seafarers are required to be familiarized with the ECDIS equipment installed on board. To provide a certificate and/or record certified the completion of the training is recommended as a countermeasure against PSC comments. Master and deck officers should hold training certificates for ECDIS.

7. Plan approval for ECDIS installation

For ECDIS already installed on board the ship and newly installed for existing ships before applicable due date, the drawings of installation are not necessary to be submitted for approval. After ECDIS is installed, ClassNK will examine the ECDIS on the safety equipment survey.

8. Survey for ECDIS

The following should be ensured or verified during the survey:

- (1) Copy of type approval certificate and performance standards applied;
- (2) Connection to emergency source of electrical power, gyro compass, speed log and GPS receiver;
- (3) Display of latest ECN on the ECDIS and possession of ENC fully provided for intended voyages;
- (4) Back-up arrangement complied with the requirements; and
- (5) When navigation charts are supplied as a backup, the charts should be updated.

9. Others

The IMO information, instructions by the Flag State and list of type approved ECDIS will be informed on ECDIS News in the ClassNK web site.

Regarding Marine Notice issued by AMSA for ships calling at Australian ports, please refer to the ClassNK Technical Information TEC-1067.

Regarding revised IHO standards of Electronic Navigation Charts (ENC), please also refer to the ClassNK Technical Information TEC-1101 and TEC-1106.

(To be continued)

For any questions about the above, please contact:

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Attachment:

1. IMO performance standards for ECDIS MSC.232(82)
2. IMO Circular STCW.7/Circ.24/Rev.1