

Subj: “Installation and Operation of ECDIS on board Greek Vessels”

- Ref: a) IMO Res. A.817(19) as amended
 b) IMO Res. MSC 232(82)
 c) Reg. V/ 19.2.10 of SOLAS '74 as amended and in force
 d) IMO SN.1/Circ.266/Rev.1/ 7.12.2010*

1. **Scope:** The present **Greek flag Circular No: 4339.20/03/11** issued on 16/11/2011 sets the framework for **ECDIS operation on board Greek flagged ships**.
2. **Introduction:** Pursuant to the provisions of MSC 282(86), which entered into force on 1/1/2011, **ECDIS can replace the regular hard copy navigation charts** on board Greek ships, **provided that the relevant preconditions**, as set out below in the pertinent **para (8), are being complied with**.
3. **Implementation:** The fitting of ECDIS is mandatory for passenger ships above 500GT and cargo ships over 3000 GT engaged in international voyages. The fitting of ECDIS shall take place before or at the latest during the first statutory survey for the issuance or renewal or endorsement of the passenger ship safety certificate or the cargo ship safety equipment certificate respectively on or after the dates shown in the following table:

Ship type	Date of built	Tonnage (GT)	Implementation date
Pax	On or after 1.7.12	500 and above	Immediately
Pax	Before 1.7.12	500 and above	1.7.2014
Cargo ships	On or after 1/7/14	3000 and above	Immediately
Cargo ships	On or after 1.7.13	10000 and above	Immediately
Cargo ships	Before 1.7.13	Up to 10000	Not Applicable
Cargo ships	Before 1.7.13	10001 and up to 20000	1.7.2018
Cargo ships	Before 1.7.13	20001 and up to 50000	1.7.2017
Cargo ships	Before 1.7.13	50001 and above	1.7. 2016
Tankers	On or after 1.7.12	3000 and above	Immediately
Tankers	Before 1.7.12	3000 and above	1.7.2015

4. **Exemptions:** Ships envisaged to be definitively withdrawn from trade within a two years' time span from the pertinent compliance date -as set by the above categorization-, are exempted from the obligation to be equipped with ECDIS. In that case, a relevant **exemption certificate** shall be issued to the vessel **by the certifying RO** and the **validity of the relevant statutory certificates of those ships shall be limited** to a date not exceeding two years from the final date of compliance with the applicable ECDIS regulation, as appropriate.

5. **Existing ECDIS installations on board:**

Existing installations conformant to the requirements of Res A.817(19) and accompanied with the pertinent type approval certificates might be accepted by the certifying RO, only in cases where the relevant installations have been concluded **before 1/1/2009**. Otherwise they shall be replaced by systems complying with the requirements set out in Res. MSC 232(82).
Electronic Chart Display and Information System in a RNC (Raster Navigation Chart) format or any existing **RCDS** (Raster Chart Display System) are **not acceptable** and hence shall be replaced with a system of an approved type.

6. **New ECDIS installations:** they shall fully comply with the requirements set out in MSC 232(82). Their installation and satisfactory performance on board will be certified by the statutory certificates issuing RO, and, **well before this certification is undertaken, the ship's managers shall submit to the RO the "Installation File" that shall contain** the following documentation items:
 - .1 Attestation issued by the installing firm or by the maker of ECDIS that the system has been properly installed and that it is functioning satisfactorily with its own updated software version and that it has been updated with the last corrections of the nautical charts.
 - .2 Attestation issued by the manufacturer, regarding the installation firm's capability to perform such works, after being duly authorized and trained to this end by the manufacturer.
 - .3 A ship's navigation bridge diagram that depicts the layout / arrangement of the ECDIS equipment (primary or / and back up) as well as all other navigational aids / equipment or systems linked to the ECDIS system(s).
 - .4 Users' manual in Greek or in English (in electronic format or as a hard copy document)

.5 Copies of the type approval certificates of the ECDIS model along with those of its installed peripherals. It shall be noted that cabling should be of an approved type and the installed interfaces shall be accompanied by certificates for electromagnetic compatibility (e.g. iaw IEC 60945 or Directive 2004/108/EC).

It shall be noted that the ECDIS equipment falls under Annex A.1 of MED 96/98 /EC as amended and in force, and shall bear the relevant wheel marking.

.6 Attestation of the installing firm that there has been a demonstration of ECDIS's function to officers of the ship or competent managerial staff of the managing company for familiarization in respect of the use of the system.

A copy of the aforesaid file should be kept on board too.

7. **Updating of the safety certificate:** if the system has not been examined by the certifying RO , then no ship's (pax or cargo) safety certificate shall be issued nor renewed by the certifying RO.
During this survey it should be verified that the system operates as per IMO resolutions' (A.817(19) and MSC 232(82)) requirements, as applicable in each particular case. Upon completion of the inspection and the issuance / renewal / endorsement of the Safety Certificate, a relevant entry shall be made in the corresponding field of the equipment table.
8. **ECDIS back up arrangements:** if so decided by the Master , whenever the ship's voyage planning (in line with SOLAS '74 Reg V/34) is being undertaken by the use of ECDIS instead of conventional charts, then, back up arrangements shall be available on board. It should be acceptable on board Greek vessels for hard copies of nautical charts not to be placed on board whenever electronic back up systems are available instead. Absolute **precondition** for this is that: these back up arrangements fulfil the requirements of Annex 6 to IMO Res. A. 817(19), for the systems installed before 1.1.2009, and a necessary reference exists on the type approval certificate of the equipment. Regardless of the above, raster chart display system (**RCDS**) is not being accepted even as a buck up ECDIS arrangement on board. Whenever the back up arrangements is of an electronic type , then these shall be completely independent from the ECDIS primary. It shall have an independent power supply from a different power pack, an independent display, parallel connections for the data sensors (e.g. GPS, gyro , etc.), or connectors to spare data sensors (e.g. second GPS, gyro , THD, etc.)
It is acceptable that the display screen of the back up ECDIS to be the same with the radar under the following preconditions:
- .1 The said capacity to be provided for by the equipment's manufacturer and to be explicitly stated on the ECDIS type approval certificate (e.g. radar overlay functionality)
- .2 The radar screen to be of an approved type that fulfils the requirements contained in the specific IMO resolutions to the extent applicable as a back up ECDIS screen.
- .3 It shall not be connected to the radar which is being monitored by VDR or s-VDR.

.4 It shall provide for a selection on displayed information derived from radar or from ECDIS, or from both of them combined, without reducing the quality of information given by each system.

.5 There shall be at least two radars on board.

9. **Updating - faults:** the master is at all times responsible so as for the system to be continuously updated, including its back up and the operational system which is being utilized by the equipment (as per normative reference (d)).

The ISM managers shall act prudently by ensuring onboard availability and use of proper system updates and up grades. In case of failure or even incapability of updating, the certifying RO shall be immediately informed. If the deficiency cannot be rectified in the port where the ship berths, the certifying RO may grant an extension for compliance until the next port where the necessary corrective actions can be undertaken. Whenever the said ship solely utilizes electronic charts (primary & back up) and a problem appears in one out of both, the certifying RO **shall ensure** that before sailing the vessels has been furnished with conventional hard copies of nautical charts necessary for the intended voyages.

The compliance with the provisions of the regulatory requirements referenced under (d) is being regarded as mandatory, and for this reason, the master shall provide for the maintenance of a relevant archive on updates of the systems' software utilized on board, as per maker's guidance.

10. **Connection to VDR/ s-VDR/ GPS/ AIS:**

i. The ECDIS image shall be recorded in the s-VDR , in all vessels carrying s-VDR, with the same analysis and pace as done with the radar connection.

This is not mandatory whenever the ship's radar is connected to the s-VDR or whenever the ECDIS connection to the s-VDR negatively affects their operation. In all other cases (when a s-VDR is not onboard, or the radar is connected to the VDR or s-VDR) and their performance is not being negatively affected (ECDIS or VDR) by this connection, the recording of the ECDIS image is recommended.

ii. Both AIS and GPS shall be connected to the ECDIS systems. The user shall be able to isolate the AIS information from the ECDIS. It is also accepted for the radar image to appear on the ECDIS display and vice versa; this does not imply that both the aforementioned systems may share the same display screen -with the exception of the back up ECDIS described in above para (6). The other connected equipment mentioned in the regulatory documents referred to under (a) & (b) shall be connected to ECDIS as far as technically feasible only in case where their connection does not impede their functionality.

11. The Associations to whom this circular has been communicated are requested to inform their members.

12. The ROs issuing the ship's Statutory Certificates for the ships obliged to observe the hereinabove requirements, must examine the compliance by the ships to these requirements.

[13. The Port Authorities shall include this circular bearing serial number 76 in Table 7 (NTL Sector) of our Department's Permanent Circulars, which has been communicated with our circular No: 4115/01/2003/16-01-2003 and examine its implementation.]

The MSIGD General Director

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