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Maritime navigation and radiocommunication equipment and systems - Electronic chart display and information system (ECDIS) - Operational and performance requirements, methods of testing and required test results

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Käesolev Eesti standard EVS-EN 61174:2009 sisaldab Euroopa standardi EN 61174:2008 ingliskeelset teksti.	This Estonian standard EVS-EN 61174:2009 consists of the English text of the European standard EN 61174:2008.
Standard on kinnitatud Eesti Standardikeskuse 19.01.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 19.01.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
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ICS 47.020.70

Võtmesõnad: energy conservations, maritime, navigation, performance, radiocommunication, requirements, test results, testing

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61174

November 2008

ICS 47.020.70

Supersedes EN 61174:2001

English version

Maritime navigation and radiocommunication equipment and systems - Electronic chart display and information system (ECDIS) - Operational and performance requirements, methods of testing and required test results

(IEC 61174:2008)

Matériels et systèmes de navigation et de radiocommunication maritimes - Systèmes de visualisation des cartes électroniques et d'information (ECDIS) - Exigences d'exploitation et de fonctionnement, méthodes d'essai et résultats d'essai exigés (CEI 61174:2008)

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Elektronisches Kartendarstellungs- und Informationssystem (ECDIS) - Betriebs- und Leistungsanforderungen, Prüfverfahren und geforderte Prüfergebnisse (IEC 61174:2008)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 80/535/FDIS, future edition 3 of IEC 61174, prepared by IEC TC 80, Maritime navigation and radiocommunication equipment and systems, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61174 on 2008-10-01.

This European Standard supersedes EN 61174:2001.

The main changes with respect to EN 61174:2001 are listed below:

– EN 61174:2008 incorporates revised performance standards for ECDIS adopted by the IMO as resolution MSC.232(82) in December 2006;

– the test methods have been updated accordingly and new tests added for encrypted ENC data;

– the revised IMO performance standards refer to performance standards for displays adopted by the IMO as resolution MSC.191(79) and these have been incorporated by reference to EN 62288;

– Annex E of the previous edition which defined navigation symbols has been deleted as this information is now in EN 62288;

– five new annexes have been added.

IMO changed the order of the performance standards in MSC.232(82) compared with the previous standards in resolution A.817(19). Annex N gives a cross-referencing of clause numbering.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2009-07-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-10-01

Annex ZA has been added by CENELEC.

———————

Endorsement notice

The text of the International Standard IEC 61174:2008 was approved by CENELEC as a European Standard without any modification.

———————

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60945	- [1)]	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	2002 [2)]
IEC 61162	Series	Maritime navigation and radiocommunication equipment and systems - Digital interfaces	EN 61162	Series
IEC 62288	- [1)]	Maritime navigation and radiocommunication equipment and systems - Presentation of navigation-related information on shipborne navigational displays - General requirements, methods of testing and required test results	EN 62288	2008 [2)]
IEC 62388	- [1)]	Maritime navigation and radiocommunication equipment and systems - Shipborne radar - Performance requirements, methods of testing and required test results	EN 62388	2008 [2)]
IMO SOLAS	1974	International Convention for the Safety of Life at Sea	-	-
IMO A.424(XI)	1979	Performance standards for gyro-compasses	-	-
IMO A.694(17)	1991	General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids	-	-
IMO A.821(19)	1995	Performance standards for gyro-compasses for high-speed craft	-	-
IMO A.823(19)	1995	Performance standards for automatic radar plotting aids (ARPAs)	-	-
IMO A.824(19)	1995	Performance standards for devices to indicate speed and distance	-	-
IMO A.830(19)	1995	Code on Alarms and Indicators	-	-
IMO MSC.191(79)	- [1)]	Performance standards for the presentation of navigation-related information on shipborne navigational displays	-	-
IMO MSC.192(79)	- [1)]	Adoption of the revised performance standards for radar equipment	-	-

[1)] Undated reference.

[2)] Valid edition at date of issue.

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Publication	Year	Title	EN/HD	Year
IMO MSC.232(82)	2006	Adoption of the revised performance standards for electronic chart display and information systems (ECDIS)	-	-
IMO MSC/ Circular 982	2000	Guidelines on ergonomic criteria for bridge equipment and layout	-	-
IMO SN/ Circular 243	2004	Guidelines for the presentation of navigation related symbols, terms and abbreviations	-	-
IMO SN.1/ Circular 266	2007	Maintenance of electronic chart display and information system (ECDIS) software	-	-
IHO M-3	2007	Resolutions of the IHO, Chapter A, Section 3, Technical Resolution 3.11	-	-
IHO S-32 appendix 1	- [1)]	Hydrographic Dictionary - Glossary of ECDIS Related Terms	-	-
IHO S-52	1996	Specifications for chart content and display aspects of ECDIS	-	-
IHO S-52 appendix 1	1996	Guidance on updating the electronic navigational chart	-	-
IHO S-52 appendix 2	2004	Colour and symbol specifications for ECDIS	-	-
IHO S-57 appendix B.1	2000	ENC product specification	-	-
IHO S-61	1999	Product specification for raster navigational charts (RNC)	-	-
IHO S-63	2008	IHO data protection scheme	-	-
IHO S-64	- [1)]	Test data sets for ECDIS	-	-

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MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS –

Electronic chart display and information system (ECDIS) – Operational and performance requirements, methods of testing and required test results

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1 Scope

This International Standard specifies the performance requirements, methods of testing and required test results of equipment conforming to performance standards not inferior to those adopted by the IMO in resolution MSC.232(82).

This standard is based upon the performance standards of IMO resolution MSC.232(82), and is also associated with IMO resolution A.694(17) and IEC 60945. Reference is made, where appropriate, to IMO resolution MSC.232(82), and all subclauses whose wording is identical to that in the resolution are printed in italics.

In association with the above IMO resolution MSC.232(82), are the International Hydrographic Organization (IHO) special publications S-32, S-52, S-57, S-61, S-63 and S-64. This standard has included extracts from the above publications where they are applicable to this equipment. Where reference is made, all subclauses whose wording is identical to that in the publications, are printed in italics.

(232/A2.1) *These performance standards should apply to all ECDIS equipment carried on all ships as follows:*

– *dedicated standalone workstation.*

– *a multifunction workstation as part of an INS.*

(232/A2.2) *These performance standards apply to ECDIS mode of operation, ECDIS in RCDS mode of operation as specified in* Annex G *and ECDIS backup arrangements as specified in* Annex F*.*

(232/A2.3) *Requirements for structure and format of the chart data, encryption of chart data as well as the presentation of chart data are within the scope of relevant IHO standards, including those listed in* the normative references*.*

The requirements of this standard are not intended to prevent the use of new techniques in equipment and systems, provided the facilities offered are not inferior to those stated.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60945, *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results*

IEC 61162 (all parts), *Maritime navigation and radiocommunication equipment and systems – Digital interfaces*

IEC 62288, *Maritime navigation and radiocommunication equipment and systems – Presentation of navigation-related information on shipborne navigational displays – General requirements – Methods of testing and required test results*

IEC 62388, *Maritime navigation and radiocommunication equipment and systems – Shipborne Radar – Performance requirements – Methods of testing and required test results*

IMO *International Convention for the safety of life at sea (SOLAS)* 1974 (as amended)

IMO A.424(XI):1979, *Performance standards for gyro-compasses*

IMO A.694(17):1991, *General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids*

IMO A.821(19):1995, *Performance standards for gyro-compasses for high-speed craft*

IMO A.823(19):1995, *Performance standards for automatic radar plotting aids*

IMO A.824(19):1995, *Performance standards for devices to indicate speed and distance*

IMO A.830(19):1995, Code on Alarms and Indicators

IMO MSC.191(79), *Performance standards for the presentation of navigation-related information on shipborne navigational displays*

IMO MSC.192(79), *Revised performance standards for radar equipment*

IMO MSC.232(82):2006, *Revised Performance standards for electronic chart display and information systems (ECDIS)*

IMO MSC/Circ.982 (2000), *Guidelines on ergonomic criteria for bridge equipment and layout*

IMO SN/Circ.243 (2004), *Guidelines for the Presentation of Navigation-related Symbols, Terms and Abbreviations*

IMO SN.1/Circ.266 (2007), *Maintenance of electronic chart display and information system (ECDIS) software*

IHO M-3:2007, *Resolutions of the IHO, Chapter A, Section 3, Technical Resolution 3.11*

IHO S-32, appendix 1, *Hydrographic dictionary – Glossary of ECDIS related terms*

IHO S-52:1996, *Specifications for chart content and display aspects of ECDIS*

IHO S-52, appendix 1:1996, *Guidance on updating the electronic navigational chart*

IHO S-52, appendix 2:2004 *Colour and symbol specifications for ECDIS*

IHO S-57, appendix B.1: 2000, *ENC product specification*

IHO S-61:1999, *Product specification for raster navigational charts (RNC)*

IHO S-63:2008, *IHO data protection scheme*

IHO S-64, *Test data sets for ECDIS*

3 Terms, definitions and abbreviations

For the purposes of this document, the following terms, definitions and abbreviations apply.

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