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Ships and marine technology — ECS databases — Content, quality, updating and testing

*Navires et technologie maritime — Bases de données ECS — Contenu,
qualité, mise à jour et essais*



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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Requirements	2
4.1 ECS Database contents	2
4.1.1 Contents in general	2
4.1.2 Details of contents	3
4.2 ECS Database quality	5
4.2.1 Product specification	5
4.2.2 Process control	5
4.2.3 Source documents	6
4.2.4 Resolution	6
4.2.5 Reproduction accuracy	7
4.2.6 Correctness and completeness of encoding	7
4.3 ECS Database updating	9
5 Test methods	10
5.1 General	10
5.2 Testing of the production process	10
5.2.1 Product specification	10
5.2.2 Process control	10
5.2.3 Source documents	10
5.3 Testing of the ECS Database	11
5.3.1 Testing tools	11
5.3.2 Cartographic framework	11
5.3.3 Resolution	11
5.3.4 Reproduction accuracy	12
5.3.5 Details of ECS Database contents	13
5.3.6 Updating the ECS Database	13
Bibliography	14

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 19379 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 6, *Navigation*.

Introduction

This International Standard covers the content, quality, updating and testing of an Electronic Charting System (ECS) Database. This International Standard does not cover the system (hardware and operating software) on which the ECS Database is used. Its purpose is to clearly define the *minimum* acceptable requirements for electronic chart data to support a system of electronic charts with maximum safety, efficiency and convenience. The three requirements, contents, quality and updating, seriously impact the safety of navigation. Hence the provisions of this International Standard that define these requirements are made with care, consistent with concerns for navigational safety. All three of the requirements lend themselves to precise description, definition and measurement. Hence it is reasonable to rely on a Standard to assure a major contribution to navigation safety when using a compliant electronic chart.

ECS are Electronic Chart Systems that electronically display the real-time vessel position and relevant nautical chart data and information from the ECS Database on a display screen, but do not meet all of the IMO requirements for ECDIS and are not intended to satisfy the SOLAS Chapter V requirement to carry a navigational chart.

National regulatory authorities may wish to require compliance with this International Standard for data used in ECS or other electronic navigation systems regulated by their countries.

Ships and marine technology — ECS databases — Content, quality, updating and testing

1 Scope

This International Standard contains the requirements and test methods for the production of an ECS Database. It addresses the elements of the database relevant to safety of navigation including content, quality and updating.

This International Standard provides guidance on production and testing of an ECS Database. It does not provide detailed coverage of the methods and techniques required for database design and development, nor does it address specific quality management procedures.

The main users of this International Standard will be ECS Database producers. ECS manufacturers and national regulatory authorities may find the guidance in this International Standard relevant.

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.

ISO 9000:2000 (all parts), *Quality management and quality assurance standards*

3 Terms and definitions

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

3.1

Electronic Chart Display and Information System

ECDIS

navigation information system which is defined in the IMO Performance Standard for ECDIS (IMO Resolution A.817(19), as amended)

3.2

Electronic Chart System

ECS

navigation information system that electronically displays vessel position and relevant nautical chart data and information from the ECS Database on a display screen, but does not meet all the IMO requirements for ECDIS and is not intended to satisfy the SOLAS Chapter V requirement to carry a navigational chart

3.3

ECS Database

database, standardized as to content, quality and updating, issued for use with an ECS

3.4

vector data presentation

method of representing individual chart features digitally by points, lines and polygons and text given through their coordinates, attributes and appropriate code(s)