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Ships and marine technology — Marine magnetic compasses, binnacles and azimuth reading devices

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

This second edition cancels and replaces the first edition (ISO 25862:2009), which has been technically revised.

The main changes compared to the previous edition are as follows:

— Clause 1: an overview of the annexes was added.

— Clause 2: moved IMO Resolution A. 382 (X) to the Bibliography.

— Clause 3: 3.4 and 3.5 were added.

— Clause 4: 4.1 was added. The temperature range of Class B magnetic compasses was changed to "−30 °C to +60 °C" (4.2.6). The magnetic moment of Class B magnetic compasses was added to Figure 1. Table 2 was updated (Equal interval of the graduation of Class B magnetic compasses was changed to "1°, 2°, 2,5° or 5°". Card numbered of Class B magnetic compasses was changed to "Every 30° or every 10°".) and 4.7 was updated.

— Clause 5: 5.1, 5.2.1, and 5.3.1 were added. 5.2.6 and 5.3.6 were updated.

— Clause 6: 6.1 was added.

— Annex D: D.2.4.1 and D.2.6.1 were added.

— Annex H: H.2.1 was added.

— Bibliography: IMO Resolution A. 382 (X) and EN 166 were added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Ships and marine technology — Marine magnetic compasses, binnacles and azimuth reading devices

1 Scope

This document specifies requirements for the construction and performance of marine magnetic compasses for navigation and steering purposes, binnacles and azimuth reading devices.

Two types of binnacle are specified; the appropriate type for a given vessel is determined by the design of the ship (see Clause 5).

This document applies to liquid-filled magnetic compasses:

— intended for use in ship's navigation and steering in sea navigation;

— having a direct reading system; and

— which can be of the reflecting, projecting or transmitting types.

In the context of this document, a magnetic compass is an instrument consisting of a directional system supported by a single pivot inside a bowl that is completely filled with liquid and supported by gimbals inside or outside the bowl. However, this document also addresses compasses without gimbals; the requirements relating to gimbals do not apply to such compasses.

This document applies to magnetic compasses carried on board:

a) all ships required to carry a standard compass as per SOLAS Chapter V, the Class A magnetic compass;

b) lifeboats and rescue boats as per the IMO Lifesaving Appliances (LSA) Code, fitted with the Class B magnetic compass; and

c) all ships to which a) and b) above do not apply, but which are fitted with a Class A or B magnetic compass.

This document does not apply to:

a) dry card compasses;

b) types of compass designed on principles different from those stated above or not complying with the descriptions given; or

c) hand bearing compasses.

The requirements for the testing and certification of marine magnetic compasses, azimuth reading devices and binnacles are given in Annexes A, B, C, and D. The requirements for the positioning in ships, the determination of safe distances and the deviation adjustment of compasses are given in Annexes E, F and G, respectively. The special requirements of the magnetic compass for lifeboats/rescue boats are given in Annex H.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1069, *Magnetic compasses and binnacles for sea navigation — Vocabulary*