INTERNATIONAL STANDARD

**ISO 22090-2**

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# Ships and marine technology — Transmitting heading devices (THDs) —

## Part 2: Geomagnetic principles

*Navires et technologie maritime — Dispositifs de transmission de données de pilotage —*

*Partie 2: Principes géomagnétiques*

Reference number
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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 8, *Ships and marine technology*, Subcommittee SC 6, *Navigation and ship operations*.

This second edition cancels and replaces the first edition (ISO 22090-2:2004), which has been technically revised. It also replaces ISO 22090-2:2004/Cor1:2005.

ISO 22090 consists of the following parts, under the general title *Ships and marine technology — Transmitting heading devices (THDs)*:

— *Part 1: Gyro-compasses*

— *Part 2: Geomagnetic principles*

— *Part 3: GNSS principles*

 

# Ships and marine technology — Transmitting heading devices (THDs) —

# Part 2: Geomagnetic principles

## 1 Scope

This part of ISO 22090 specifies the construction, performance, and testing of a device employing only magnetic means as transmitting heading devices required by chapter V, SOLAS 1974 (as amended).

*A Transmitting Heading Device (THD) is an electronic device* that *provides information about the ship's true heading.*

*In addition to the general requirements contained in* IMO *Resolution A.694(17)* to which IEC 60945 is associated *and the relevant standard for the sensing part used, the THD equipment* shall *comply with the following minimum requirements.*

*Where the IMO performance standards which apply to the sensing part do not specify a geographical operating area the THD* shall *operate*

a) at a minimum rate of turn 20 °/s and

b) *from 70° latitude south to 70° latitude north as a minimum*.

*The THDs complying with the requirements contained in this* part of ISO 22090 *can be used for heading information as contained in chapter V of the SOLAS Convention.*

*In addition such THDs are intended to meet the dynamic requirements contained in the HSC Code, chapter 13 for the carriage of a suitable device providing heading information*.

NOTE 1 Several technologies can be used to detect and transmit heading information. It is illogical to standardize the detection of the heading separately from the transmission of the heading. Therefore, separate parts of this part of ISO 22090 refer to different technologies. The requirements of this part of ISO 22090 only apply to the principle of the geomagnetic. Other technologies are covered in other parts of ISO 22090.

NOTE 2 All requirements that are extracted from the recommendation of IMO Resolution MSC.116(73) on performance standards for transmitting heading devices are printed in italics.

A standard magnetic compass with a pickup sensor could be applied as a sensing part of this standard of geomagnetic principle. However the IMO performance resolution MSC.116(73) requires that the THD is intended to be met for the dynamic requirements of the HSC code. Nevertheless, when the THD would be only used other than the HSC, the limit of rate of turn may be 6 °/s instead of 20 °/s.

## 2 Normative references

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

ISO 11606, *Ships and marine technology — Marine electromagnetic compasses*

ISO 25862, *Ships and marine technology — Marine magnetic compasses, binnacles and azimuth reading devices*