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First edition
2007-02

**Maritime navigation and radiocommunication
equipment and systems –
Automatic identification system (AIS) –**

**Part 1:
AIS Base Stations –
Minimum operational and performance
requirements, methods of testing and
required test results**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MARITIME NAVIGATION AND RADIOCOMMUNICATION
EQUIPMENT AND SYSTEMS –
AUTOMATIC IDENTIFICATION SYSTEM (AIS) –**

**Part 1: AIS Base Stations –
Minimum operational and performance requirements,
methods of testing and required test results**

FOREWORD

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International Standard IEC 62320-1 has been prepared by IEC Technical Committee 80: Maritime navigation and radiocommunication equipment and systems.

The text of this standard is based on the following documents:

FDIS	Report on voting
80/460/FDIS	80/468/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of IEC 62320 series, under the general title: *Maritime navigation and radio-communication equipment and systems – Automatic Identification System (AIS)* can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

Withdrawn

INTRODUCTION

Chapter V of the International Convention for the Safety of Life at Sea 1974 (SOLAS) requires mandatory carriage of Automatic Identification System (AIS) equipment on all vessels constructed on or after 01 July 2002. Carriage for other types and sizes of SOLAS Convention vessels was required to be completed not later than 31 December 2004.

SOLAS Chapter V, Regulation 19, clause 2.4.5 states that AIS shall:

- 1 provide automatically to appropriate equipped shore stations, other ships and aircraft information, including ship's identity, type, position, course, speed, navigational status and other safety-related information;
- 2 receive automatically such information from similarly fitted ships;
- 3 monitor and track ships; and
- 4 exchange data with shore-based facilities.

In addition, the IMO performance standards for AIS state that:

- The AIS should improve the safety of navigation by assisting in the efficient navigation of ships, protection of the environment, and operation of Vessel Traffic Services (VTS), by satisfying the following functional requirements:
 - 1 in a ship-to-ship mode for collision avoidance;
 - 2 as a means for littoral States to obtain information about a ship and its cargo; and
 - 3 as a VTS tool, i.e. ship-to-shore (traffic management).
- The AIS should be capable of providing to ships and to competent authorities, information from the ship, automatically and with the required accuracy and frequency, to facilitate accurate tracking. Transmission of the data should be with the minimum involvement of ship's personnel and with a high level of availability.

The provision of Shore Based AIS will be necessary to attain the full benefit of the SOLAS Convention requirements.

This part of IEC 62320 provides the minimum operational and performance requirements, methods of test and the required test results for AIS Base Stations. The testing is divided into three sections, the transceiver tests, the logical tests and the Presentation Interface tests. These are captured in Clauses 8, 9 and 10 respectively. The method used for testing is that the EUT should meet all the tests requirements of Clause 8 before proceeding to Clause 9. Likewise, the unit should meet all of the test requirements before proceeding to Clause 10. Clause 10 has also been prioritised so that the tests are progressive

Clauses 5 to 7 provide functional requirement information and Clause 8 provides the general test environment for the EUT.