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Maritime navigation and radiocommunication equipment and systems – Automatic identification systems (AIS) – Part 2: Class A shipborne equipment of the automatic identification system (AIS) – Operational and performance requirements, methods of test and required test results

Matériels et systèmes de navigation et de radiocommunication maritimes – Systèmes d'identification automatique (AIS) Partie 2: Équipements AIS de type Classe A embarqués – Exigences d'exploitation et de fonctionnement, méthodes d'essai et résultats d'essai exigés

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CONTENTS

FOREWORD 10
1 Scope 12
2 Normative references 12
3 Terms, definitions and abbreviated terms 13
3.1 Terms and definitions 13
3.2 Abbreviated terms 14
4 General requirements 15
4.1 General 15
4.1.1 Overview 15
4.1.2 General requirements 15
4.1.3 Capabilities of the AIS 15
4.1.4 Additional requirements 15
4.1.5 Transmitter shutdown procedure 16
4.1.6 Quality assurance 16
4.2 Modes of operation 16
4.3 Manuals 16
4.4 Marking and identification 16
5 Other requirements 17
5.1 Environmental, power supply, special purpose and safety requirements 17
5.2 Display of information 17
5.3 Update of software 17
6 Performance requirements 17
6.1 Composition 17
6.2 Time and position 18
6.2.1 Source for UTC 18
6.2.2 Source for AIS position reporting 18
6.3 User interface 19
6.4 Identification 19
6.5 Information 19
6.5.1 Information provided by the AIS 19
6.5.2 Information reporting intervals 20
6.5.3 Ship reporting capacity 21
6.6 Event log 21
6.7 Permissible initialization period 22
6.8 Power supply 22
6.9 Technical characteristics 22
6.10 Alerts and indications, fall-back arrangements 22
6.10.1 Built-in test equipment 22
6.10.2 Status messages 25
6.11 Display, input and output 29
6.11.1 Minimum keyboard and display (MKD) 29
6.11.2 Communication test 33
6.11.3 Alerts and status information 33
6.11.4 Data protection 34
6.11.5 Distance calculation 34
6.12 Protection from invalid controls 35

7 Technical requirements 35
7.1 General 35
7.2 Physical layer 35
7.2.1 General 36
7.2.2 Transmitter parameters 36
7.2.3 Receiver parameters 37
7.3 Link layer 37
7.3.1 General 37
7.3.2 Link sublayer 1: Medium Access Control (MAC) 38
7.3.3 Link sublayer 2: Data Link Service (DLS) 38
7.3.4 Link sublayer 3 – Link Management Entity (LME) 38
7.4 Network layer 41
7.4.1 General 41
7.4.2 Management of regional operating settings 41
7.5 Transport layer 42
7.6 Presentation interface 42
7.6.1 General 42
7.6.2 Automatic input of sensor data 43
7.6.3 High speed input/output ports 44
7.6.4 Long-range communication ports 50
7.6.5 Optional IEC 61162-450/-460 interface 52
7.6.6 Test of the optional IEC 61162-450/-460 interface 55
7.6.7 BIIT alert output 56
8 Long-range applications 57
8.1 General 57
8.2 Long-range application by two-way interface 57
8.2.1 General 57
8.2.2 Interrogations and responses 57
8.2.3 Manual and automatic response 57
8.2.4 Data formats and contents 57
8.2.5 Addressing AIS-units 58
8.3 Long-range application by broadcast 58
9 Test conditions 59
9.1 Normal and extreme test conditions 59
9.1.1 Normal test conditions 59
9.1.2 Extreme test conditions 59
9.2 Standard test environment 59
9.3 Additional test arrangements 60
9.3.1 Arrangements for test signals applied to the receiver input 60
9.3.2 Encoder for receiver measurements 60
9.3.3 Waiver for receivers 60
9.3.4 Impedance 60
9.3.5 Artificial antenna (dummy load) 60
9.3.6 Facilities for access 60
9.3.7 Modes of operation of the transmitter 60
9.4 Common test conditions for protection from invalid controls 61
9.5 Measurement uncertainties 61
10 Test signals 61

10.1 Standard test signal number 1 (DSC) 61
10.2 Standard test signal number 2 (TDMA) 61
10.3 Standard test signal number 3 (TDMA) 61
10.4 Standard test signal number 4 (PRBS) 62
10.5 Standard test signal number 5 (PRBS) 62
11 Power supply, special purpose and safety tests 63
12 Environmental tests 63
13 EMC tests 63
14 Operational tests 63
14.1 Identification and operating modes 63
14.1.1 Autonomous mode 63
14.1.2 Assigned mode 64
14.1.3 Polled mode 64
14.1.4 Addressed operation 65
14.1.5 Broadcast operation 66
14.1.6 Multiple slot messages 67
14.2 Manuals, marking and identification 67
14.2.1 Method of measurement 67
14.2.2 Required results 68
14.3 Information 68
14.3.1 Information provided by the AIS 68
14.3.2 Reporting intervals 68
14.4 Event log 70
14.4.1 Method of measurement 70
14.4.2 Required results 70
14.5 Software update 70
14.5.1 Method of measurement 70
14.5.2 Required results 71
14.6 Initialization period 71
14.6.1 Method of measurement 71
14.6.2 Required results 71
14.7 Technical characteristics 71
14.7.1 Channel selection 71
14.7.2 Transceiver protection 71
14.7.3 Automatic power setting 72
14.8 Alerts and indicators, fall-back arrangements 72
14.8.1 Loss of power supply 72
14.8.2 Monitoring of functions and integrity 72
14.8.3 Monitoring of sensor data 75
14.9 Display, input and output 78
14.9.1 Data input/output facilities 79
14.9.2 Initiate message transmission 79
14.9.3 Communication test 80
14.9.4 System control 80
14.9.5 Display of received targets 81
14.9.6 Display of position quality 82
14.9.7 Display of targets if optional filter is implemented 82
14.9.8 Display of received safety related messages 83

14.9.9 Presentation of navigation information 83
15 Physical tests 83
15.1 TDMA transmitter 84
15.1.1 Frequency error 84
15.1.2 Carrier power 84
15.1.3 Slotted transmission spectrum 85
15.1.4 Modulation accuracy 86
15.1.5 Transmitter output power characteristics 86
15.2 TDMA receivers 87
15.2.1 Sensitivity 87
15.2.2 Error behaviour at high input levels 88
15.2.3 Co-channel rejection 88
15.2.4 Adjacent channel selectivity 89
15.2.5 Spurious response rejection 89
15.2.6 Intermodulation response rejection and blocking 92
15.2.7 Transmit to receive switching time 93
15.2.8 Immunity to out-of-band energy 93
15.3 Conducted spurious emissions 94
15.3.1 Spurious emissions from the transmitter 94
15.3.2 Spurious emissions from the receiver 95
16 Specific tests of link layer 95
16.1 TDMA synchronisation 95
16.1.1 Synchronisation test using UTC 95
16.1.2 Synchronisation test using UTC with repeated messages 96
16.1.3 Synchronisation test without UTC, semaphore 96
16.1.4 Synchronisation test without UTC 97
16.1.5 Reception of un-synchronised messages 97
16.2 Time division (frame format) 97
16.2.1 Method of measurement 97
16.2.2 Required results 97
16.3 Synchronisation and jitter accuracy 97
16.3.1 Definition 97
16.3.2 Method of measurement 97
16.3.3 Required results 98
16.4 Data encoding (bit stuffing) 98
16.4.1 Method of measurement 98
16.4.2 Required results 98
16.5 Frame check sequence 98
16.5.1 Method of measurement 98
16.5.2 Required results 98
16.6 Slot allocation (channel access protocols) 98
16.6.1 Network entry 98
16.6.2 Autonomous scheduled transmissions (SOTDMA) 99
16.6.3 Autonomous scheduled transmissions (ITDMA) 99
16.6.4 Safety related/binary message transmission 99
16.6.5 Transmission of Message 5 (ITDMA) 100
16.6.6 Assigned operation 100
16.6.7 Group assignment 101
16.6.8 Fixed allocated transmissions (FATDMA) 104

16.6.9 Randomisation of message transmissions 105
16.7 Message formats 105
16.7.1 Received messages 105
16.7.2 Transmitted messages 105
17 Specific tests of network layer 106
17.1 Dual channel operation – Alternate transmissions 106
17.1.1 Method of measurement 106
17.1.2 Required results 106
17.2 Regional area designation by VDL message 106
17.2.1 Method of measurement 106
17.2.2 Required results 107
17.3 Regional area designation by serial message 107
17.4 Regional area designation with lost position 107
17.4.1 Method of measurement 107
17.4.2 Required results 107
17.5 Power setting 107
17.5.1 Method of measurement 107
17.5.2 Required results 108
17.6 Message priority handling 108
17.6.1 Method of measurement 108
17.6.2 Required results 108
17.7 Slot reuse and FATDMA reservations 108
17.7.1 Method of measurement 108
17.7.2 Required results 108
17.8 Management of received regional operating settings 109
17.8.1 Test for replacement or erasure of dated or remote regional operating settings 109
17.8.2 Test of correct input via presentation interface or MKD 110
17.8.3 Test of addressed telecommand 110
17.8.4 Test for invalid regional operating areas 111
17.9 Continuation of autonomous mode reporting interval 111
17.9.1 Method of test 111
17.9.2 Required results 111
18 Specific tests of transport layer 111
18.1 Addressed messages 112
18.1.1 Transmission 112
18.1.2 Acknowledgement 112
18.1.3 Transmission retry 112
18.1.4 Acknowledgement of addressed safety related messages 112
18.1.5 Behaviour of NavStatus 14 reception 112
18.2 Interrogation responses 113
18.2.1 Method of measurement 113
18.2.2 Required results 113
19 Specific presentation interface tests 113
19.1 General 113
19.2 Checking manufacturer's documentation 113
19.3 Electrical test 114
19.3.1 Method of measurement 114
19.3.2 Required results 114

19.4 Test of input sensor interface performance ... 114
19.4.1 Method of measurement ... 114
19.4.2 Required results ... 114
19.5 Test of sensor input ... 114
19.5.1 Test of GNS input ... 114
19.5.2 Test of RMC input ... 115
19.5.3 Test of DTM input ... 115
19.5.4 Test of GBS input ... 116
19.5.5 Test of VBW input ... 117
19.5.6 Test of VTG input ... 117
19.5.7 Test of HDT/THS input ... 117
19.5.8 Test of ROT input ... 118
19.5.9 Test of different inputs ... 118
19.5.10 Test of multiple inputs ... 119
19.6 Test of high speed output ... 119
19.6.1 Method of measurement ... 119
19.6.2 Required results ... 119
19.7 High speed output interface performance ... 119
19.7.1 Method of measurement ... 119
19.7.2 Required results ... 120
19.8 Output of undefined VDL messages ... 120
19.8.1 Method of measurement ... 120
19.8.2 Required results ... 120
19.9 Test of high speed input ... 120
19.9.1 General ... 120
19.9.2 Test of VSD input sentence ... 120
19.9.3 Test of SSD input sentence ... 120
19.9.4 Test of EPV input sentence ... 121
19.9.5 Test of the Pilot Port access level ... 122
20 Long-range functionality tests ... 122
20.1 Long-range application by two-way interface ... 122
20.1.1 LR interrogation ... 122
20.1.2 LR "all ships" interrogation ... 122
20.1.3 Consecutive LR "all ships" interrogations ... 123
20.2 Long-range application by broadcast ... 123
20.2.1 Long-range broadcast ... 123
20.2.2 Multiple assignment operation ... 124
Annex A (informative) Block diagram of AIS ... 126
Annex B (normative) AIS interface overview ... 127
Annex C (normative) DSC functionality ... 128
C.1 DSC compatibility ... 128
C.2 DSC receiver tests ... 128
C.2.1 Maximum sensitivity ... 128
C.2.2 Error behaviour at high input levels ... 128
C.2.3 Co-channel rejection ... 129
C.2.4 Adjacent channel selectivity ... 129
C.2.5 Spurious response rejection ... 129
C.2.6 Intermodulation response rejection ... 130

C.2.7 Blocking or desensitisation 131
C.2.8 Conducted spurious emissions from the receiver 132
C.3 DSC functionality tests 132
C.3.1 Definition 132
C.3.2 Method of measurement 132
C.3.3 Required results 133
Annex D (informative) Alert handling with ALR/ACK 134
Annex E (normative) Calculation of area size and distance 136
E.1 Importance of a common method for area size and distance calculations 136
E.2 Calculation of area sizes 136
E.3 Calculation of general distances 137
E.3.1 General 137
E.3.2 Great-circle 137
E.3.3 Rhumb-line distance 137
Annex F (normative) New interface sentences – Sender signature authentication (SSA) 138
Annex G (normative) Updated interface sentences 140
G.1 General 140
G.2 VSD – AIS voyage static data 140
Annex H (informative) Conversion between IEC 61162-1 sentences and IEC 61162-3 parameter group numbers 142
Annex I (normative) Extended tow dimension values 144
I.1 Purpose and background 144
I.2 Method 144
Bibliography 146

Figure 1 – OSI layer model 35
Figure 2 – Power versus time characteristics 36
Figure 3 – Format for repeating four-packet cluster 62
Figure 4 – Measurement arrangement for frequency error 84
Figure 5 – Measurement arrangement for carrier power 84
Figure 6 – Emission mask for slotted transmission 85
Figure 7 – Measurement arrangement for modulation accuracy 86
Figure 8 – Measurement arrangement 87
Figure 9 – Measurement arrangement with two generators 89
Figure 10 – SINAD or PER/BER measuring equipment 90
Figure 11 – Test set-up 92
Figure 12 – Transmit to receive switching time measurement setup 93
Figure 13 – Regional area scenario 106
Figure C.1 – Measurement arrangement for inter-modulation 131
Figure D.1 – State diagram of IEC 61993-2 Ed.2 Alert handling 135
Figure I.1 – Input, extension and transmitted dimensional values 145

Table 1 –Talker IDs for automatic detection of electronic position fixing system type 19
Table 2 – Information reporting intervals for autonomous mode 21

Table 3 – Required conditions for BIIT and reaction of the system to the condition detected 23
Table 4 – Classification of required alerts 24
Table 5 – Mapping between BAM alert states and ALR alert states 25
Table 6 – Sensor status indications signalled using TXT sentence formatter 26
Table 7 – Position sensor fall-back conditions 27
Table 8 – Use of accuracy (PA) flag 28
Table 9 – ROT sensor fallback conditions 29
Table 10 – Identification of locating devices when active 30
Table 11 – Identification of locating devices when in test mode 30
Table 12 – Identification of locating devices for type approval testing 31
Table 13 – Message display on MKD 32
Table 14 – Position quality 33
Table 15 – Transmitter parameters 36
Table 16 – Power versus time characteristics 37
Table 17 – Receiver parameters 37
Table 18 – Use of VDL messages 39
Table 19 – Presentation interface access 43
Table 20 – IEC 61162-1 sensor sentences 44
Table 21 – AIS high-speed input data and formats 46
Table 22 – AIS high-speed output data and formats 47
Table 23 – Property identifiers 48
Table 24 – AIS Long-range communications input data and formats 51
Table 25 – LR output data formats 52
Table 26 – Default input transmission groups with applicable sentences 53
Table 27 – TAG block parameters 53
Table 28 – CRP sentences applicable for Class A AIS 54
Table 29 – Tests to be repeated for IEC 61162-450 interface 56
Table 30 – LR data types 58
Table 31 – Content of first two packets 62
Table 32 – Fixed PRS data derived from Recommendation ITU-T O.153 62
Table 33 – Peak frequency deviation versus time 86
Table 34 – Tests to be performed 92
Table 35 – Primary channels for each region 107
Table D.1 – IEC 61993-2:2012 alert states 134
Table D.2 – IEC 61993-2:2012 alert events 134
Table E.1 – Coordinate points 136
Table H.1 – Conversion between IEC 61162-1 and IEC 61162-3 142

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

Part 2: Class A shipborne equipment of the automatic identification system (AIS) – Operational and performance requirements, methods of test and required test results

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This third edition cancels and replaces the second edition published in 2012. This edition constitutes a technical revision.

This edition includes the following technical changes with respect to the previous edition:

a) it incorporates the technical characteristics included in Recommendation ITU-R M.1371-5:2014;

b) it introduces the concept of locating device groups in order to include EPIRB AIS and MOB AIS in addition to AIS SART;

c) it adds security features for configuration input by introducing a new sentence SSA;

d) it adds optional implementation of IEC 61162-450/460 interfaces;

e) it adds requirements for bridge alert management (BAM);

f) it introduces extended dimension values used by towing vessels;

g) it adds a software update requirement.

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

FDIS	Report on voting
80/888/FDIS	80/890/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 document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61993 series, published under the general title *Maritime navigation and radiocommunication equipment and systems – Automatic identification systems (AIS),* can be found on the IEC website.

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

Part 2: Class A shipborne equipment of the automatic identification system (AIS) – Operational and performance requirements, methods of test and required test results

1 Scope

This part of IEC 61993 specifies the minimum operational and performance requirements, methods of testing and required test results conforming to performance standards adopted by IMO in Resolution MSC.74(69):1998, Annex 3. This document incorporates the applicable technical characteristics of Class A shipborne equipment included in Recommendation ITU-R M.1371 and takes into account the ITU Radio Regulations, where applicable. In addition, it takes account of IMO Resolution A.694(17) to which IEC 60945 is associated. When a requirement in this document is different from IEC 60945, the requirement of this document takes precedence.

This document also specifies the minimum requirements both for the means to input and display data and for the interfaces to other equipment suitable to be used as means of input and display data.

NOTE All text of this document that is identical to that in IMO resolution MSC.74(69):1998, Annex 3, or to that in ITU-R Recommendation M.1371 is printed in *italics*, and references to the resolution (abbreviated to "A3") or the recommendation (abbreviated to "M.1371") and paragraph numbers are indicated in parentheses, for instance (A3/3.3) or (M.1371-5/A2-3.3) respectively.

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.

IEC 60945:2002, *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results*

IEC 61108 (all parts), *Maritime navigation and radiocommunication equipment and systems – Global navigation satellite systems (GNSS)*

IEC 61162-1:2016, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 1: Single talker and multiple listeners*

IEC 61162-2, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 2: Single talker and multiple listeners, high-speed transmission*

IEC 61162-450:2018, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 450: Multiple talkers and multiple listeners – Ethernet interconnection*

IEC 61162-460, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security*

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*

IEC 62923-1, *Maritime navigation and radiocommunication equipment and systems – Bridge alert management – Part 1: Operational and performance requirements, methods of testing and required test results*

IEC 62923-2, *Maritime navigation and radiocommunication equipment and systems – Bridge alert management – Part 2: Alert and cluster identifiers and other additional features*

ITU-R Recommendation M.493-14, *Digital selective-calling system for the use in the maritime mobile service*

ITU-R Recommendation M.541-10, *Operational procedures for the use of digital selective-calling equipment in the maritime mobile service*

ITU-R Recommendation M.825-3, *Characteristics of a transponder system using digital selective calling techniques for use with vessel traffic services and ship-to-ship identification*

ITU-R Recommendation M.1084-5:2012, *Interim solutions for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service*

ITU-R Recommendation M.1371-5:2014, *Technical characteristics for an automatic identification system using time-division multiple access in the VHF maritime mobile band*

ITU-T Recommendation O.153, *Basic parameters for the measurement of error performance at bit rates below the primary rate*

IMO Resolution A.694(17), *General requirements for shipborne radio equipment forming part of the Global Maritime Distress and Safety System (GMDSS) and for electronic navigational aids*

IMO Resolution MSC.43(64), as amended by MSC.111(73), *Guidelines and Criteria for Ship Reporting Systems*

IMO Resolution MSC.74(69):1998, Annex 3, *Recommendation on performance standards for AIS*

IMO Resolution MSC.302(87), *Adoption of performance standards for bridge alert management*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp