



TUVALU SHIP REGISTRY

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MARINE CIRCULAR

MC-23/2012/1

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FOR: Ship Owners, Ship Managers, Ship Operators, Ship Masters, Ship Officers, Classification Societies

SUBJECT: AUTOMATIC IDENTIFICATION SYSTEM (AIS) – CARRIAGE, OPERATION AND ANNUAL TESTING

DEFINITIONS:

The following abbreviations stand for:

- “AIS” - Automatic Identification System
- “CSO” – Company Security Officer
- “GT” – Gross Tonnage in accordance to ITC 69
- “IMO” – International Maritime Organization
- “ITC 69” – International Convention on the Tonnage Measurement of Ships, 1969
- “RO” – Recognized Organization as defined by IMO Resolution MSC.349(92) and MEPC.237(65)
- “SOLAS” – International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended
- “VTS” – Vessel Traffic System

The following term shall mean:

- “Administration” – Tuvalu Ship Registry;

PURPOSE:

This Marine Circular provides guidance on the statutory carriage, operation, maintenance and annual testing requirements for Automatic Identification Systems (AIS) fitted on Tuvalu-flagged ships in accordance with the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended.

The Circular also provides guidance on the continuous operation of AIS, circumstances under which AIS may be temporarily switched off for security reasons, and annual performance testing requirements.

REFERENCES:

This Circular should be read in conjunction with the latest editions of:

- (a) SOLAS Chapter V Regulations 18 and 19
- (b) SOLAS Chapter XI-2 Regulation 8
- (c) IMO Resolution MSC.74(69), Annex 3 – Performance Standards for a Universal Shipborne Automatic Identification System (AIS), as amended
- (d) IMO Resolution MSC.308(88)
- (e) MSC.1/Circ.1252 – Guidelines on Annual Testing of the Automatic Identification System (AIS)

(f) SN/Circ.227 – Guidelines for the Installation of a Shipborne Automatic Identification System (AIS)

APPLICATION:

This Circular applies to Tuvalu-flagged ships required to be fitted with AIS under SOLAS Chapter V Regulation 19.

The mandatory AIS carriage requirements include:

- passenger ships irrespective of size;
- cargo ships of 300 GT and above engaged on international voyages;
- cargo ships of 500 GT and above not engaged on international voyages; and
- any other ships required by the Administration.

Ships not subject to mandatory SOLAS carriage requirements may be required by the Administration to carry AIS where considered necessary for safety, security or operational reasons.

CONTENTS:

1. Implementation

Ships subject to SOLAS Chapter V Regulation 19 shall be fitted with AIS in accordance with the current requirements of SOLAS.

2. AIS Carriage Requirements

All applicable ships shall be fitted with:

- an IMO type-approved AIS;
- equipment installed in accordance with IMO performance standards;
- installation complying with the manufacturer's instructions and applicable IMO guidance; and
- interfaces with required navigational sensors.

Installation shall be verified during the applicable statutory surveys.

3. Operation of AIS

AIS shall be maintained in operation at all times while underway or at anchor in accordance with SOLAS Chapter V.

The information transmitted shall be complete, accurate and kept up to date, including:

- ship's identity;
- navigational status;
- position;
- course and speed; and
- voyage-related information.

Masters shall ensure voyage information is updated whenever appropriate.

4. Security Considerations

The Master retains overriding authority under SOLAS Chapter XI-2 Regulation 8 where the operation of AIS may compromise the safety or security of the ship.

Where the Master determines that continued transmission of AIS information presents a security risk, AIS may be temporarily switched off.

Examples include:

- piracy or armed robbery risk areas;
- military operations;
- other exceptional circumstances affecting the safety or security of the ship.

Whenever AIS is switched off:

- the CSO, Coastal State Authority and Administration shall be notified
- the reason shall be recorded in the Official Log Book;
- the duration shall be recorded;
- AIS shall be reactivated as soon as the security situation permits; and
- the Company Security Officer shall be informed in accordance with the Ship Security Plan, where applicable.

5. Annual Testing of AIS

In accordance with SOLAS Chapter V Regulation 18, every AIS installation shall undergo an annual performance test.

The test shall be carried out by:

- a Recognized Organization acting on behalf of the Administration; or
- an approved testing or servicing facility.

The annual test shall verify, as appropriate:

- correct programming of static data;
- voyage-related information;
- interface with navigational sensors;
- radio-frequency performance;
- transmission and reception capability;
- operational functionality; and
- on-air performance (broadcasting and receiving digital data via VTS).

Testing shall be conducted in accordance with MSC.1/Circ.1252 (refer to Annex).

A copy of the test report shall be retained onboard for inspection.

6. Surveys

Compliance with AIS requirements will be verified during statutory surveys conducted on behalf of the Administration.

Failure to maintain AIS in proper operating condition may result in:

- survey deficiencies;
- detention by Port State Control; and
- withdrawal of statutory certification where appropriate.

7. Maintenance

Owners and operators shall ensure AIS equipment is:

- maintained in accordance with manufacturer's instructions;
- repaired promptly when defects are identified;
- periodically inspected; and
- supplied with current software where approved by the manufacturer.

8. Records

The following records shall be retained onboard:

- Annual AIS Test Reports;
- maintenance records;
- repair records;
- software update records (where applicable); and
- records of any periods during which AIS was intentionally switched off.

Yours sincerely,

Deputy Registrar
Tuvalu Ship Registry

ANNEX

GUIDELINES ON ANNUAL TESTING OF THE AIS

1. The annual testing of the AIS should be carried out by a qualified radio inspector authorized by the Administration or a RO.
2. The annual testing of the AIS installation should include:
 - 2.1. installation details including antenna layout, initial configuration report, interconnection diagrams, provision of the pilot plug and power supply arrangements;
 - 2.2. checking the correct programming of the ships static information;
 - 2.3. the ability of the AIS to receive ships dynamic information from the appropriate sensors;
 - 2.4. the ability to correctly input the ships voyage related data;
 - 2.5. a performance test of the equipment including radio frequency measurements; and
 - 2.6. an on-air test that the unit is working correctly using for example an appropriate VTS station or a suitable test equipment.
3. To accommodate performance test to align with the appropriate survey under the Harmonized System of Survey and Certification (HSSC), the annual testing may be carried out:
 - 3.1. up to three (3) months before the due date of the passenger ship renewal survey or the cargo ship safety equipment renewal survey; and
 - 3.2. three (3) months before or after the due date of the cargo ship safety equipment periodical/annual survey (the maximum period between subsequent test is governed by the time window associated to the subsequent surveys, unless either certificate has been extended as permitted by SOLAS regulation 1/14, in which case a similar extension may be granted by the Administration).
4. The annual testing should be recorded in the form of the model test report given in the APPENDIX. If the language used is neither English, nor French, nor Spanish, the text should include a translation into one of these languages, as appropriate. A copy of the test report should be retained on board the ship.

APPENDIX

AUTOMATIC IDENTIFICATION SYSTEM (AIS) TEST REPORT

Name of ship/call sign:	
MMSI number:	
Port of registry:	
IMO number:	
Gross Tonnage:	
Date keel laid:	

1. Installation details		
	Item	Status
1.1	AIS transponder type:	
1.2	Type approval certificate	
1.3	Initial installation configuration report on board?	
1.4	Drawings provided? (Antenna, AIS-arrangement and block diagram)	
1.5	Main source of electrical power,	
1.6	Emergency source of electrical power,	
1.7	Capacity to be verified if the AIS is connected to a battery	
1.8	Pilot plug near pilots operating position?	
1.9	120 V AC provided near pilot plug? (Panama and St. Lawrence requirement)	

2. AIS programming - Static information		
2.1	MMSI number	
2.2	IMO number	
2.3	Radio call sign	
2.4	Name of ship	
2.5	Type of ship	
2.6	Ship length and beam	
2.7	Location of GPS antenna	

3. AIS programming – Dynamic information		
3.1	Ships position with accuracy and integrity status (Source: GNSS)	
3.2	Time in UTC (Source: GNSS)	
3.3	Course over ground (COG) (will fluctuate at dockside) (Source: GNSS)	
3.4	Speed over ground (SOG) (zero at dockside) (Source: GNSS)	
3.5	Heading (Source: Gyro)	
3.6	Navigational status	
3.7	Rate of turn, where available (ROT)	
3.8	Angle of heel, pitch and roll, where available	

4. AIS programming – Voyage related information		
4.1	Ships draught	
4.2	Type of cargo	
4.3	Destination and ETA (at masters discretion)	
4.4	Route plan (optional)	
4.5	Short safety-related messages	

5. Performance test using measuring instrument		
5.1	Frequency measurements AIS Ch. 1 and 2, GMDSS Ch. 70	
5.2	Transmitting output, AIS Ch. 1 and 2, GMDSS Ch. 70	
5.3	Polling information Ch. 70	
5.4	Read data from AIS	
5.5	Send data to AIS	
5.6	Check AIS response to “virtual vessels”	

