



Department of Economic Development
Isle of Man Ship Registry Consultation:
Proposed update to legislation implementing
SOLAS Chapter II-1:
Ships constructed from 1 July 1986 – 31 December 2008
Construction – Structure, subdivision and stability, machinery and electrical
installations

This consultation paper sets out the Isle of Man Government's proposals to make new Regulations to give effect to SOLAS Chapter II-1 for ships constructed on or after 1 July 1986 up to and including 31 December 2008. The Regulations will replace existing regulations giving effect to SOLAS Chapter II-1 for these ships.

As you may recall, the IOM Ship Registry recently updated SOLAS Chapter II-1 Regulations for ships constructed on or after 1 January 2009, and as a result of that exercise, it became clear it would be helpful to do the same for the earlier SOLAS Chapter II-1 Regulations.

We are also taking the opportunity to review the interpretation of SOLAS Chapter II-1 requirements for ships constructed on or after 1 July 1986 up to and including 31 December 2008, and this is contained in Section 2 of this document.

We would be grateful for any comments on the proposed implementation of SOLAS Chapter II-1 as detailed in this consultation paper (preferably by email) to:

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This consultation will close at 5.00pm on 17 May 2016

This consultation contains the following:

Section 1 - Overview of the draft Regulations (Pages 1 – 5)

Section 2 - Interpretation of SOLAS Chapter II-1 requirements (Page 6 and the Annex) 2

SECTION 1

Overview of the draft SOLAS II-1 Regulations

Introduction

SOLAS Chapter II-1 contains requirements for the subdivision of ships into watertight compartments to be such that after assumed damage to the ship's hull the vessel will remain afloat and stable. Requirements for watertight integrity and bilge pumping arrangements for passenger ships are also laid down as well as stability requirements for both passenger and cargo ships. Requirements covering machinery and electrical installations are designed to ensure that services which are essential for the safety of the ship, passengers and crew are maintained under various emergency conditions.

The new Regulations are summarised as follows –

The Merchant Shipping (SOLAS II-1) (Ships constructed 1 July 1986 to 31 December 2008) Regulations 2016 –

The Regulations apply to –

(a) Manx ships, wherever they may be, constructed on or after 1 July 1986 up to and including 31 December 2008, engaged on international voyages; and

(b) foreign ships constructed on or after 1 July 1986 up to and including 31 December 2008 whilst they are within the territorial waters of the Island.

(c) The Regulations do **not** apply to –

(i) pleasure vessels;

(ii) fishing vessels;

(iii) high-speed craft;

(iv) MODUs;

(v) ships of war or troopships;

(vi) ships not propelled by mechanical means;

(vii) cargo ships of less than 500 gross tonnage; and

(viii) wooden ships of primitive build.

(d) The Regulations revoke and replace the Merchant Shipping (SOLAS Chapter II-1 Construction) Regulations 2007 (SD 502/07).

The main provisions of the Regulations are –

1 Company's responsibility

A Company is required to ensure a ship complies with the Regulations.

In these Regulations, 'Company' means "the owner of a ship to which the Regulations apply or any other organisation or person such as the manager, or the bareboat charterer, who has assumed responsibility for operation of the ship from the owner and who, on assuming such

responsibility, has agreed to take over all the duties and responsibilities imposed on the Company by the SOLAS Convention.

2 Offences and penalties

The Regulations contain provision relating to offences and penalties for non-compliance.

A company which fails to comply with the regulations commits an offence and is liable on conviction on information to custody for not more than 2 years, a fine, or both; and on summary conviction to a fine not exceeding £5,000.

3 Provisions relating to offences

(a) It is a defence for a person charged under the Regulations to show that he or she took all reasonable steps to avoid the commission of the offence.

(b) If the commission by any person of an offence under the Regulations is due to the act or default of some other person, that other person is guilty of the offence and a person may be charged with and convicted of the offence by virtue of regulation 6 whether or not proceedings are taken against the first-mentioned person.

(c) If a body corporate is guilty of an offence under the Regulations, and that offence is proved to have been committed with the consent or connivance of, or to have been attributable to any neglect on the part of a director, manager, secretary or other similar officer of the body corporate, or any person who was purporting to act in any such capacity, he or she, as well as the body corporate, is guilty of that offence and is liable to be proceeded against and punished accordingly.

4 Requirement to comply with SOLAS Chapter II-1

1. Manx ships to which the Regulations apply must comply with the requirements of SOLAS Chapter II-1 up to and including amendments adopted by MSC.170(79) on 9 December 2004 which came into force on 1 July 2006, as apply in relation to a ship of its description.
2. Amendments have also been made to SOLAS Chapter II-1 which apply to ships constructed on or after 1 July 1986 up to and including 31 December 2008. In addition, ships must comply with the relevant parts of these amendments adopted by –
 - a. MSC.194(80) on 20 May 2005 and entered in to force on 1 January 2007 (annex 1);
 - b. MSC.216(82) on 8 December 2006 and entered in to force on 1 July 2008;
 - c. MSC.256(84) on 16 May 2008 and entered in to force on 1 January 2010; and
 - d. MSC.365(93) on 22 May 2014 and entered in to force 1 January 2016.

5 Approval, type approval, exemption, equivalent arrangements and waivers

There are various circumstances in the SOLAS II-1 text where approval or type approval is required, and certain situations where exemptions, equivalent arrangements and waivers may be granted.

a) Approval

Where SOLAS Chapter II-1, or any part of a code referenced in SOLAS Chapter II-1, requires anything to be approved by the Administration, it must be approved by the Ship Registry or a Recognised Organisation (RO).

b) Type approval

All equipment requiring type approval must be accompanied by a type approval certificate issued by -

- a Recognised Organisation listed in MSN 20; or
- a Recognised Organisation on behalf of a national Administration; or
- the Ship Registry.

If the equipment has been issued with a type approval certificate by another organisation it may only be used or fitted with the consent of the Ship Registry.

Equipment which has been certified under the Marine Equipment Directive (MED) is acceptable to be used on Isle of Man registered vessels, although it is not a mandatory requirement of the Ship Registry that equipment has been certified under the MED.

Except when it is a Convention requirement, individual test certificates are not required in addition to the type approval certificate.

c) Equivalent arrangements, exemptions and waivers

The Ship Registry may permit equivalent arrangements, exemptions and waivers on a case by case basis if it is satisfied the arrangements meet the requirements of SOLAS Chapter II-1.

6 Validity of approval, type approval, exemption, equivalent arrangements and waivers

An approval, type approval, exemption, equivalent arrangement or waiver is only valid if it is in writing and if any conditions stated in it are complied with.

7 Foreign ships

A foreign ship in the territorial waters of the Island must comply with the requirements of SOLAS Chapter II-1 up to and including amendments adopted by MSC.170(79) on 9 December 2004 which came into force on 1 July 2006, as apply in relation to a ship of its description.

Amendments have also been made to SOLAS Chapter II-1 which apply to foreign ships in the territorial waters of the Island constructed on or after 1 July 1986 up to and including 31 December 2008. Foreign ships in the territorial waters of the Island must comply with the relevant parts of these amendments adopted by –

- a. MSC.194(80) on 20 May 2005 and entered in to force on 1 January 2007 (annex 1);
- b. MSC.216(82) on 8 December 2006 and entered in to force on 1 July 2008;
- c. MSC.256(84) on 16 May 2008 and entered in to force on 1 January 2010; and
- d. MSC.365(93) on 22 May 2014 and entered in to force 1 January 2016.

8 Inspection of a foreign ship

A foreign ship in a port of the Island may be subject to inspection.

9 Provisions relating to detention

If an inspector carries out an inspection on a foreign ship in a port of the Island, and certificates required by regulation 12 or 13 of SOLAS Chapter 1 are not produced, have expired or ceased to be valid, the ship may be detained.

A foreign ship may also be detained if the inspector has clear grounds for believing that the condition of the ship or its equipment does not correspond substantially with the particulars of the certificate or the ship and its equipment are not in compliance with the provisions of SOLAS Chapter 1 Regulation 11(a) and (b).

SECTION 2

Interpretation of SOLAS Chapter II-1 requirements

SOLAS Chapter II-1 requires the ship's Flag Administration to determine how a ship must implement certain requirements. For example, SOLAS Chapter II-1 refers to things being done "to the satisfaction of the Administration" or gives the Administration the ability to permit a method of construction to permit the use of a particular material or to determine a set of guidelines.

Within SOLAS Chapter II-1 there are over 100 of these circumstances and in most cases the decisions have been delegated to the ship's Recognised Organisation. Where the Ship Registry has an interpretation or requires compliance with a standard, this is stated in the Annex* to this consultation paper.

The organisations authorised to act as Recognised Organisations by the Ship Registry are listed in MSN 020 which is available on the Ship Registry's website -

www.gov.im/ded/shipregistry

*References to SOLAS II-1 page numbers in the Annex are from SOLAS consolidated edition 2014. The Regulations have only been summarised and the SOLAS text should be referred to for the full regulation.

Annex General interpretations

SOLAS consolidated edition 2014 Regulation	Summary of the regulation	IOM Ship Registry's Requirements
SOLAS CHAPTER II-1 PART A-1 Structure of ships		
Reg. 3-3 Page 46	Every tanker shall be provided with means to enable the crew to gain safe access to the bow even in severe weather conditions. Such means of access shall be approved by the Administration based on guidelines developed by the Organization.	Means of access must be approved in accordance with Resolution MSC.62(67) - Guidelines for safe access to tanker bows.
Reg. 3-4.1.2.2 Page 47	Emergency towing arrangements at both ends shall be of adequate strength taking into account the size and deadweight of the ship, and the expected forces during bad weather conditions. The design, construction and prototype testing of emergency towing arrangements shall be approved by the Administration, based on Guidelines developed by the Organization.	Approval must be in accordance with MSC.35(63) as amended by MSC.132 (75) - Adoption of guidelines for emergency towing arrangements on tankers.
Reg. 3-4.1.3 Page 47	For tankers constructed before 1 July 2002, the design and construction of emergency towing arrangements shall be approved by the Administration, based on the Guidelines developed by the Organization.	Approval must be in accordance with MSC.35(63) as amended by MSC.132 (75) - Adoption of guidelines for emergency towing arrangements on tankers.
Reg. 3-8.3 Page 50	<u>Towing and mooring equipment</u> Arrangements, equipment and fittings provided in accordance with Regulation 3-8.2 shall meet the appropriate requirements of the Administration or an organization recognized by the Administration under regulation I/6.	Must meet the requirements of MSC/Circ.1175 - Guidance on shipboard towing and mooring equipment.

SOLAS CHAPTER II-1 Part B-1 Stability

SOLAS CHAPTER II-1 Part B-4 Stability management

Reg. 20.1 Page 80	On completion of loading of the ship and prior to its departure, the master shall determine the ship's trim and stability and also ascertain and record that the ship is in compliance with stability criteria in relevant regulations. The determination of the ship's stability shall always be made by calculation. The Administration may accept the use of an electronic loading and stability computer or equivalent means for this purpose.	Electronic loading and stability computers are acceptable.
Reg. 22.6 Page 81	Watertight doors fitted in watertight bulkheads dividing cargo between deck spaces in accordance with regulation 13.9.1 shall be closed before the voyage commences and shall be kept closed during navigation; the time of opening such doors in port and of closing them before the ship leaves port shall be entered in the logbook.	The Ship Registry requires this information to be recorded in the Isle of Man Ship Registry's Official Log Book.
Reg. 22.12 Page 82	The master shall ensure, before a ship proceeds on any voyage that an entry in the logbook is made of the time of the last closing of the doors specified in Regulation 22.13 and the time of any opening of particular doors in accordance with Regulation 22.14.	The Ship Registry requires this information to be recorded in the Isle of Man Ship Registry's Official Log Book.
Reg. 23.6 Page 83	Notwithstanding the requirements of Regulation 23.3, the Administration may permit some accesses to be opened during the voyage, but only for a period sufficient to permit through passage and, if required, for the essential working of the ship.	This is permitted under the circumstances stated.
Reg. 23.8 Page 83	Notwithstanding the requirements of Regulation 23.7, the Administration may permit some accesses within such bulkheads to be opened during the voyage but only for sufficient time to permit through passage and, if required, for the essential	This is permitted under the circumstances stated.

	working of the ship.	
Reg. 24.3 Page 84	Watertight doors or ramps fitted to internally subdivide large cargo spaces shall be closed before the voyage commences and shall be kept closed during navigation; the time of opening such doors in port and of closing them before the ship leaves port shall be entered in the logbook.	The Ship Registry requires this information to be recorded in the Isle of Man Ship Registry's Official Log Book.
SOLAS CHAPTER II-1 PART C Machinery installations		
Reg. 27.5 Page 87	Main turbine propulsion machinery and, where applicable, main internal combustion propulsion machinery and auxiliary machinery shall be provided with automatic shutoff arrangements in the case of failures such as lubricating oil supply failure which could lead rapidly to complete breakdown, serious damage or explosion. The Administration may permit provisions for overriding automatic shutoff devices.	Apply MSC.1/Circ.1345 UI of SOLAS Reg II-1/27.5 concerning machinery shut-off arrangements and oil mist detector arrangements.
Reg. 29.1 Page 87	Unless expressly provided otherwise, every ship shall be provided with a main steering gear and an auxiliary steering gear to the satisfaction of the Administration. The main steering gear and the auxiliary steering gear shall be so arranged that the failure of one of them will not render the other one inoperative.	Apply MSC.1/Circ.1398 - Unified Interpretation of SOLAS Regulation II-1/29 concerning mechanical, hydraulic and electrical independency and failure detection and response of steering control systems.
Reg. 29.17.2 Page 90	Where the steering gear includes only a single rudder actuator, special consideration is given to stress analysis for the design including fatigue analysis and fracture mechanics analysis, as appropriate, to the material used, to the installation of sealing arrangements and to testing and inspection and to the provision of effective maintenance. In consideration of the foregoing, the Administration shall adopt regulations which include the provisions of the Guidelines for acceptance of non-duplicated rudder actuators for tankers,	Apply Resolution A.467(XII) - Guidelines for acceptance of non-duplication rudder actuators for tankers, chemical tankers and gas carriers of 10,000 gross tonnage and above but less than 100,000 tonnes deadweight.

	chemical tankers and gas carriers of 10,000 gross tonnage and above but less than 100,000 tonnes deadweight, adopted by the Organization.	
Reg. 32.1 Page 93	Every steam boiler and every unfired steam generator shall be provided with not less than two safety valves of adequate capacity. However, having regard to the output or any other features of any boiler or unfired steam generator, the Administration may permit only one safety valve to be fitted if it is satisfied that adequate protection against overpressure is thereby provided.	It is permitted for only one safety valve to be fitted taking account of the guidance stated in MSC.1/Circ.1286 Unified interpretation of SOLAS Regulation II-1/32.1.
SOLAS CHAPTER II-1 Part D Electrical installations		
Reg. 44.1 Page 107	Emergency generating sets shall be capable of being readily started in their cold condition at a temperature of 0°C. If this is impracticable, or if lower temperatures are likely to be encountered, provision acceptable to the Administration shall be made for the maintenance of heating arrangements, to ensure ready starting of the generating sets.	Heating equipment must be fitted to ships operating in temperatures of less than 0°C to ensure ready starting of the generating sets.
Reg. 45.2 Page 108	Main and emergency switchboards shall be so arranged as to give easy access as may be needed to apparatus and equipment, without danger to personnel. The sides and the rear and, where necessary, the front of switchboards shall be suitably guarded. Exposed live parts having voltages to earth exceeding a voltage to be specified by the Administration shall not be installed on the front of such switchboards. Where necessary, nonconducting mats or gratings shall be provided at the front and rear of the switchboard.	Exposed live parts having voltages to earth exceeding 50 volts shall not be installed on the front of the switchboards.
Reg. 45.5.3 Page 109	Cables and wiring serving essential or emergency power, lighting, internal communications or signals shall so far as practicable be routed clear of galleys, laundries, machinery spaces of category A and their	Apply MSC/Circ.808 - Recommendation on performance standards for public address systems on passenger

	<p>casings and other high fire risk areas. In ro-ro passenger ships, cabling for emergency alarms and public address systems installed on or after 1 July 1998 shall be approved by the Administration having regard to the recommendations developed by the Organization. Cables connecting fire pumps to the emergency switchboard shall be of a fire-resistant type where they pass through high fire risk areas. Where practicable all such cables should be run in such a manner as to preclude their being rendered unserviceable by heating of the bulkheads.</p>	<p>ships, including cabling.</p>
<p>Reg. 45.11 Page 110</p>	<p>In tankers, electrical equipment, cables and wiring shall not be installed in hazardous locations unless it conforms with standards not inferior to those acceptable to the Organization. However, for locations not covered by such standards, electrical equipment, cables and wiring which do not conform to the standards may be installed in hazardous locations based on a risk assessment to the satisfaction of the Administration, to ensure that an equivalent level of safety is assured.</p>	<p>Apply the standards published by the International Electrotechnical Commission, and in particular IEC 60092-502:1999: Electrical installations in ships – Tankers.</p>