

International Regulation News Update

[http://www.eagle.org/eagleExternalPortalWEB / Resources / Regulatory Information](http://www.eagle.org/eagleExternalPortalWEB/ Resources / Regulatory Information)

Maritime Safety Committee's 92nd Session

12 to 21 June 2013

<u>Regulatory Development</u>	<u>Ship⁺ Application</u>
<p>ADOPTED SOLAS REVISIONS (page 1)</p> <p><i>Passenger Muster Drills</i></p> <p><i>Drills for Enclosed Space Entry and Rescue</i></p> <p><i>Bridge navigational watch alarm systems</i></p>	<p><i>Passenger Ships</i></p> <p><i>All Ships</i></p> <p><i>Cargo Ships < 3k gt</i></p>
<p>APPROVED SOLAS REVISIONS (pages 1 - 3)</p> <p><i>Fixed Inert Gas Systems</i></p> <p><i>Intact and Damage Stability Instruments</i></p> <p><i>Ventilation and Gas Detection</i></p> <p><i>Escape from Machinery Space Workshops</i></p> <p><i>Steering Gear Tests</i></p> <p><i>Fire-extinguishing systems</i></p>	<p><i>New Chemical and Gas Carriers</i></p> <p><i>Oil, Chemical and Gas Carriers</i></p> <p><i>New Vehicle Carriers</i></p> <p><i>New Ships</i></p> <p><i>New Ships</i></p> <p><i>New Container Ships</i></p>
<p>PASSENGER SHIP SAFETY INITIATIVES (pages 3 & 4)</p> <p><i>Evacuation Routes</i></p> <p><i>Increased Level of Survivability</i></p> <p><i>Disposition of Watertight Doors</i></p> <p><i>Onboard Stability PCs</i></p> <p><i>System/Equipment Assessments</i></p>	<p><i>Passenger Ships</i></p>
<p>NEW INTERPRETATIONS (pages 4 - 5)</p> <p><i>Fire Protection Interpretations</i></p> <p><i>Design and Equipment Interpretations</i></p>	<p><i>All ships</i></p> <p><i>All ships</i></p>
<p>(+ “ships” are all self propelled vessels)</p>	



IMO's Maritime Safety Committee (MSC) met at the Organization's London Headquarters for its 92nd session from 12 to 21 June 2013. A number of SOLAS revisions which impact new and existing ships were adopted.

ADOPTED SOLAS REVISIONS

Passenger Muster Drills

Following up on the interim recommendations for the enhanced safety of passenger ships contained in MSC.1/Circ.1446, the Committee adopted revisions to SOLAS III/19 as per resolution MSC.350(92). On passenger ships engaged on a voyage where passengers are scheduled to be on board for more than 24 hours, musters of, and safety briefings with, newly-embarked passengers are to take place prior to or immediately upon departure.

This requirement becomes effective on 1 January 2015. Currently, SOLAS allows such musters to take place within 24 hours after embarkation.

Drills for Enclosed Space Entry and Rescue

Crew members onboard all ships and high speed craft having rescue responsibilities or having responsibilities for enclosed space entry, such as cargo spaces, double bottoms, cargo pump-rooms where there may be an oxygen-deficient, oxygen-enriched, flammable and/or toxic atmosphere, are required to participate in an enclosed space entry and rescue drill on board at least once every two months. This revision of SOLAS III/19 was adopted by the Committee as per resolution MSC.350(92) which becomes effective on 1 January 2015.

The drills should be planned and conducted using the required equipment and should take into account newly approved Recommendations for entering enclosed spaces as per resolution A.1050(27) and the guidelines on tank entry for tankers using nitrogen as an inerting medium as per MSC.1/Circ.1401.

Bridge navigational watch alarm systems

The Committee adopted amendments to SOLAS V/19 as per resolution MSC.350(92) which correct the intended original application of bridge navigational watch alarm systems (BNWAS) to ships constructed before 1 July 2002. As ABS required compliance with the other categories/sizes of ships constructed before 1 July 2002 based on the intention of SOLAS V/19 as adopted by MSC.282(86), only two additional

categories/sizes of ABS classed ships are impacted by this new amendment:

- cargo ships ($500 \leq \text{gt} < 3000$) – BNWAS is required to be installed by the first survey after 1 January 2017 unless the ship is to be scrapped within two years after this survey
- cargo ships ($150 \leq \text{gt} < 500$) - BNWAS is required to be installed by the first survey after 1 January 2018 unless the ship is to be scrapped within two years after this survey

The complete schedule for fitting BNWAS onboard is shown in Table 1 with this revision highlighted in shaded text.

Ship Type	Ship Size	Constructed	Compliance Date
Cargo	GT ≥ 150	≥ 1 July 11	At delivery
Passenger	-	≥ 1 July 11	At delivery
Passenger	-	< 1 July 11	1 st SLP ≥ 1 July 12
Cargo	GT ≥ 3k	< 1 July 11	1 st SLE ≥ 1 July 12
	500 ≤ GT < 3k	< 1 July 11	1 st SLE ≥ 1 July 13
		< 1 July 02	1 st SLE ≥ 1 Jan 17
	150 ≤ GT < 500	< 1 July 11	1 st SLE ≥ 1 July 14
		< 1 July 02	1 st SLE ≥ 1 Jan 18

Table 1 – BNWAS Implementation Scheme

A BNWAS installed prior to 1 July 2011 to monitor bridge activity and detect operator disability which could lead to marine accidents may subsequently be exempted from full compliance with the standards contained in MSC.128(75). Otherwise, for BNWAS installed on/after 1 July 2011, in the event the officer of the watch does not periodically reset the BNWAS (every 3 to 12 minutes as determined by the Master), then:

- a 1st stage alarm is to sound on the bridge 15 secs after visual indication is initiated; then
- if not reset, a 2nd stage alarm is to sound in the back-up officer's and/or Master's cabin 15 secs after the 1st stage alarm; then
- if not reset, a 3rd stage remote alarm is to sound at the locations of other crew members who are capable of taking corrective actions 90 secs after the 2nd stage alarm is initiated.

The 2nd alarm may sound in all the above locations at the same time in which case the 3rd stage alarm may be omitted.

APPROVED SOLAS REVISIONS

Several revisions of SOLAS were *approved* during the 92nd Session and are scheduled to be *adopted* at MSC 93 in May 2014. If adopted, the amendments would enter into force on and apply to new ships constructed on or after 1 January 2016.



Fixed Inert Gas Systems

New chemical and gas carriers $\geq 8,000$ dwt will be required to be fitted with a fixed inert gas (IG) system complying with the revision of the FSS Code if they are certified to carry products under the IBC and IGC Codes, respectively. Existing chemical and gas carriers are not impacted by this new requirement provided:

- their IG system was approved based on resolution A.567(14); or
- for chemical carriers, the capacity of individual cargo tanks does not exceed $3,000 \text{ m}^3$.

Cargo tanks may be inerted after loading provided the tank remains inerted throughout the unloading and purging process prior to gas-freeing.

Equivalent arrangements or means of protection may be accepted in lieu of fixed systems on new chemical and gas carriers ($20,000 > \text{dwt} \geq 8,000$) provided equivalent arrangements are:

- capable of preventing dangerous accumulations of explosive mixtures in cargo tanks during normal service throughout the ballast voyage and necessary in-tank operations; and
- designed to minimize the risk of ignition of system-generated static electricity (e.g., use of shore-side nitrogen)

Intact and Damage Stability Instruments

Amendments to the IBC, BCH, IGC and GC Codes were approved by the Committee. If adopted in May 2014, they will require chemical and gas tankers to be fitted with an approved stability instrument capable of verifying compliance with the applicable intact and damage stability requirements. Similar revisions for oil tankers have been proposed under MARPO Annex I and are scheduled to be approved by MEPC 66 in March 2014.

The approval generally applies to the software, taking into account the guidelines provided in MSC.1/Circ.1229, but may include hardware, for example, when the instrument receives input from sensors for the contents of tanks. New tankers will need to comply on delivery and existing tankers will need to comply at the first scheduled renewal survey after 1 January 2016 but not later than 1 January 2021.

A stability instrument is not required for:

- tankers where stability is remotely verified by a means approved by the Administration;
- tankers on a dedicated service, with a limited number of permutations of loading such that all anticipated conditions have been approved;
- tankers which are loaded within an approved range of loading conditions; and
- existing tankers provided with approved limiting KG/GM curves covering all applicable intact and damage stability requirements.

An approved stability instrument does not replace the requirement for an approved Stability Booklet to be onboard. Instruments installed on existing tankers do not need to be replaced provided they are capable of verifying compliance with intact and damage stability.

Ventilation and Gas Detection

Amendments to SOLAS II-2/21 impose additional safety measures for ventilation and gas detection for new vehicle carriers with vehicle and ro-ro spaces intended for carriage, as cargo, of motor vehicles with compressed hydrogen (CH) or compressed natural gas (CNG) in their tanks for their own propulsion.

These requirements include:

- certified safe type electrical components for use in an explosive methane/air mixture (for CNG cargo) or hydrogen/air mixture (for CH cargo);
- prohibition of equipment providing a source of ignition of methane/air mixtures; and
- the provision of at least two portable gas detectors of a certified safe type for use in the explosive gas and air mixture.

Escape from Machinery Space Workshops

Amendments to SOLAS II-2/13 were approved which require, for new passenger and cargo ships, a means of escape from machinery spaces and main workshops and control rooms within those spaces via a continuous fire shelter to a safe position outside the machinery space.

Subject to MSC 93 approval, it was agreed that:

- a continuous fire shelter is a route from a main workshop, or from an engine control room, which allows escape, without entering the machinery space, to a location outside the machinery space;

- a main workshop is a compartment enclosed on at least three sides by bulkheads or gratings, usually containing welding equipment, metalworking machinery and workbenches.

Steering Gear Tests

Alternative methods of testing the main and auxiliary steering gear during sea trials are now introduced by amendments to SOLAS II-1.

The methods apply where it is impractical to test the ship at its deepest seagoing draught and running ahead at *full test speed* (corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch of the propeller).

Two alternatives were agreed for the main steering gear:

- the test should be carried out at an ahead speed that results in a force and torque applied to the main steering gear which is at least equal to the results of a test carried out with the ship at its deepest seagoing draught and running at *full test speed*; or
- the rudder force and torque at the sea trial loading condition are reliably predicted and extrapolated to the full load condition at the *full test speed*.

Similar alternatives were agreed for the auxiliary steering gear, except that the *full test speed* is given as the maximum continuous revolutions of the main engine and maximum design pitch or 7 knots, whichever is greater.

Fire-extinguishing systems

New ships designed to carry containers on the weather deck are to carry, in addition to the required fixed fire-extinguishing systems and appliances, at least one water mist lance -- a tube with a piercing nozzle which is capable of penetrating a container wall and producing water mist inside the container when connected to the fire main (see Figure 1).

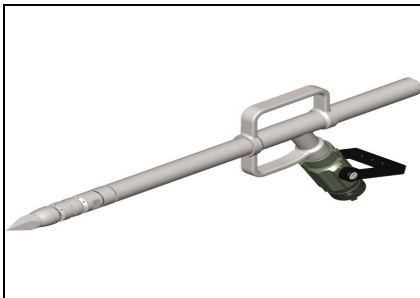


Figure 1 – Piercing Nozzle

Additionally, ships carrying five or more tiers of containers on the weather deck shall carry, at least two mobile water monitors on ships with a breadth up to 30 m and at least four mobile water monitors on ships with breadth ≥ 30 m.

PASSENGER SHIP SAFETY INITIATIVES

The Committee, after reviewing the marine casualty investigation report into the loss of the passenger ship Costa Concordia including the preliminary recommendations, agreed to the following actions under long-term work on passenger ship safety.

Evacuation Routes

The mandatory requirements on evacuation routes to the embarkation deck will be reconsidered. Current SOLAS regulations and guidelines on evacuation analysis are for safe evacuation of all persons on board ro-ro passenger ships. For non-ro-ro passenger ships, these regulations and guidelines are only applied on a voluntary basis or sometimes in case of alternative design.

A principal concern is that the current simulation guidelines in MSC.1/Circ.1238 lead to necessary assistance by the crew as opposed to the evacuation being designed so that it is understood by the passengers themselves.

Increased Level of Survivability

Proposals to raise the Required Subdivision Index 'R' (a measure of the ship's survivability level which is currently dependent on ship length and number of persons on board) is currently under evaluation. The results from two studies (GOAL based Damage Stability project, GOALDS, and a study carried out by the Ship Stability Research Centre (SSRC) of the University of Strathclyde) indicate that the current SOLAS required survivability of passenger ships after damage is not adequate and that it can be improved from both practical and economic standpoints.

An IMO FSA Experts Group held from 11 to 13 November 2013 reviewed these two studies and will present their assessment to MSC 93 in June 2014. Initial concerns focused on the unknown impact an increase in 'R' would have on certain types of ships (e.g., ro-ro passenger ships) and small passenger ships (the GOALDS study did not consider smaller passenger ships carrying less than approximately 1,000 persons). This review is scheduled to be completed in 2015.

**Disposition of Watertight Doors**

Open for review are the provisions in MSC.1/Circ.1380 "Guidance for watertight doors on passenger ships which may be opened during navigation". A target completion date in 2015 has been agreed.

SOLAS II-1/22 allows watertight doors to be temporarily opened to permit crew passage or work in the immediate vicinity of the door is carried out. Additionally, certain watertight doors may remain open but only if considered necessary to safely operate the ship's machinery or to permit passengers to have normally unrestricted access throughout the passenger area as determined by the Administration after considering the impact on ship operations and survivability based on MSC.1/Circ.1380.

Onboard Stability Computers

The mandating of onboard stability computers or shore-based support for existing ships in case of flooding is under consideration. It was tentatively agreed that any actual flooding scenarios can be assessed with current computer software, but that additional factors such as cross-flooding and progressive flooding arrangements, open watertight doors, sea state and wind may add further uncertainties in the assessment of the stability of a damaged ship, particularly when a ship is in a borderline condition.

A correspondence group is to brainstorm several proposals for developing guidance on assessing system capabilities after a flooding casualty and how/if information on the functioning tank gauging systems, flooding sensors, status of watertight and shell doors can be provided to the master.

System/Equipment Assessments

A number of system and equipment capabilities on passenger ships are to undergo assessment:

- clarification of SOLAS II-1/35 concerning the distribution of bilge pumps along the length of the ship and the need for the delivery and availability of additional bilge suction to drain flooding water;
- review of emergency power redundancy on existing ships which might include fitting an additional emergency diesel generator located in a main vertical zone different than where the main source of electrical power is located;

- re-evaluation of the wide separation of compartments containing ship's essential systems (such as propulsion sets or main generators sets) in light of the "safe return to port" requirements (for new ships);
- harmonization of requirements set by Administrations by providing better guidance for determining whether the minimum number of embarkation ladders (one) on each side should be increased.

NEW INTERPRETATIONS**Fire Protection Interpretations**

The Committee approved MSC.1/Circ.1456 which clarifies:

- carriage requirements for portable gas measurement and detection instruments. A minimum of two instruments, each capable of measuring both oxygen and flammable vapour concentrations, are required onboard, or, alternatively, two portable instruments for measuring oxygen and two portable instruments for measuring flammable vapour concentrations (see also IACS UI SC 149, Rev.2).
- that in cases where self-heating of certain cargoes specified by the IMSBC Code cannot be controlled by stopping the ventilation system, carbon dioxide from a fixed system or an inert gas system can be used to control the self-heating of cargo. However, such a system cannot be used to protect spaces other than cargo spaces (see also IACS UI SC 250, Corr.1-July 2012).
- that emergency exit hatches used to escape to the embarkation deck should be fitted with securing devices which can be opened from both sides with a force not more than 150 N. The use of a spring equalizing or counterbalance device on the hinge side to reduce the force needed for opening is acceptable (in line with IACS submission FP 56/9/1).
- arrangements of emergency fire pump suction and discharge piping within the machinery space and the extent that such piping is to be enclosed in a substantial steel casing or insulated to "A-60" class standards (see also SC 245, June 2011).
- that control stations on cargo ships do not need to be protected by a fixed fire detection and fire alarm system (in line with IACS submission FP 56/9/9).



- the protected locations for fitting the fire main isolation valves (in line with IACS submission FP 56/9/5).
- that the CO₂ pre-discharge alarm may be activated before the two separate system release controls (i.e. one control to open the valve of the piping which conveys the gas into the protected space and a second control used to discharge the gas from its storage containers) are operated (e.g. by a micro-switch). Also, correct sequential operation of the controls is to be achieved by a mechanical and/or electrical interlock that does not depend on any operational procedure (see also IACS UI SC 252, Oct 2011).

Design and Equipment Interpretations

The Committee approved MSC.1/Circ.1464 which contains additional unified interpretations, based on IACS proposals, concerning:

- Compliance with the performance standards for water level detectors in cargo holds and ballast tanks of bulk carriers (see also IACS UI SC 179, Rev.2).
- Service tank arrangements for main & auxiliary engines using heavy fuel oil and marine diesel oil (e.g., to comply with Emission Control Area requirements) in order to comply with the SOLAS requirement for the 8-hour maximum continuous rating of the propulsion plant and normal operating load at sea of the generator plant. Service tanks are fuel oil tanks which contain only fuel of a quality ready for use, i.e. fuel of a grade and quality that meets the specification required by the equipment manufacturer (see also IACS UI C 123, Rev.3).

The Committee also approved several more interpretations:

- MSC.1/Circ.1466 contains recommended standards for the design, testing and type approval of fall preventer devices fitted to lifeboats which are launched using on-load release hooks.
- MSC.1/Circ.1468 provides recommendations on the operational capabilities of launching equipment in unfavorable conditions of trim and heel and on the arrangement of free-fall lifeboats onboard ships with respect to the lifeboat's launching height above the lightest seagoing condition (see also IACS UI SC 244, Rev.1).

- MSC.1/Circ.1457 clarifies the extent of protection of load bearing structures on high speed craft so as to not impair the global structural integrity of the vessel and that spaces such as the wheelhouse will not collapse in case of a fire in other areas. Also clarified is the use of fire-restricting materials for enclosed spaces and open cargo & ro-ro decks (see also IACS UI HSC 8).
- MSC.1/Circ.1465 provides clarification on surface preparation (area selection and inspection), use of epoxy based shop primers and qualifications for assistant coating inspectors under the Performance Standard for Protective Coatings (PSPC) for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers (see also IACS UI SC 259, Feb 2013).
- MSC.1/Circ.1459 clarifies that where the location of entrances, air inlets and openings in the superstructures and/or deckhouses of oil, chemical and gas carriers specified in SOLAS and the IBC and IGC Codes is not possible, other locations for these items may be accepted provided no ignition source is located in the hazardous areas defined in publication IEC 60092-502, except for electrical installations that have the required protection and have been certified as safe under that standard (in line with IACS submission FP 51/9/4).
- MSC.1/Circ.1458 clarifies that the space between solid floor plates and the bottom of the engine-room for determining the arrangement of nozzles of the water-based fixed fire-extinguishing systems in machinery space bilges. Namely, that the space is between the engine-room floor plates (perforated or non-perforated) or gratings and the bottom of the engine-room. This takes into account the focus of system manufacturers on density, droplet size and velocity of the water mist applied and the influence of obstructions on the performance of these systems (in line with IACS submission FP 56/9/11).