

**The following highlights actions taken at IMO's Maritime Safety Committee's 92<sup>nd</sup> session which met from 12 to 21 June. A number of amendments to mandatory instruments were adopted or approved at this session of the MSC. A full report of MSC 92 will be included in the next ABS International Regulatory News Update.**

### **Adopted SOLAS Amendments**

The MSC adopted a several revisions to SOLAS which are scheduled to enter into force on 1 Jan 2015:

Muster Drills – 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 shall take place prior to or immediately upon departure. Currently, SOLAS allows such musters to take place within 24 hours after embarkation.

Enclosed Space Entry - Crew members with enclosed space entry or rescue responsibilities onboard all ships and high speed craft need to participate in an enclosed space entry and rescue drill to be held on board the ship at least once every two months. Drills should be planned and conducted using the required equipment and should take into account the newly approved Recommendations for entering enclosed spaces aboard ships as per resolution A.1050(27).

BNWAS - the amendments correct the intended 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(68), only two additional categories/sizes of ABS classed ships are impacted by this new amendment:

- cargo ships ( $500 \leq gt < 3000$ ) – 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 ( $150 \leq gt < 500$ ) - 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.

### **Approved Amendments**

MSC approved a number of amendments to SOLAS which, if adopted at MSC 93 in May 2014, are expected to be applicable to new ships constructed on or after 1 January 2016:

Container Ships - 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 consisting of 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. Ships carrying five or more tiers of containers on the weather deck shall carry, in addition to the minimum required, 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  $\geq 30$  m.

RO-RO Vessel Fire Safety - Additional safety measures for ventilation and gas detection are specified for vehicle carriers with vehicle and ro-ro spaces intended for carriage, as cargo, of motor vehicles with compressed hydrogen or compressed natural gas in their tanks for their own propulsion.

Means of Escape - Requirements are now specified for the means of escape via a continuous fire shelter to a safe position outside the machinery space from machinery spaces and workshops and control rooms within those spaces for new passenger and cargo ships.

Chemical and Gas Carriers - New chemical and gas carriers  $\geq 8,000$  dwt will be required to be fitted with a fixed IG system complying with the revision of the FSS Code (Annex 2 of FP 56/23) 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 existing IG system was approved or, for chemical carriers, the capacity of tanks does not exceed 3,000 m<sup>3</sup>. Cargo tanks may be inerted after loading, provided the tank is inerted before unloading begins and remains inert until the tank has been purged of all flammable vapors before 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 MARPOL Annex I and the IBC, BCH, IGC and GC Codes were approved which will require oil, chemical and gas tankers to be fitted with an approved stability instrument capable of verifying compliance with the applicable intact and damage stability requirements. The approval generally applies to the software using 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 on a dedicated service, with a limited number of permutations of loading such that all anticipated conditions have been approved
- tankers where stability is remotely verified by a means approved by the Administration
- tankers which are loaded within an approved range of loading conditions
- 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 not to be replaced provided they are capable of verifying compliance with intact and damage stability.

Steering gear tests – Alternative methods of testing steering gear during sea trials are now introduced by amendments to SOLAS II-1 where it is impractical to test the ship at its deepest seagoing draught and running ahead at the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch of the propeller.

### **Passenger Ship Safety**

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:

- before deciding on the need for double-skin protection of compartments containing vital propulsion and electrical equipment on new ships, additional information on the depth of damage penetration was needed in order that this proposal can be fully assessed as well as other solutions which might provide an equivalent safety level. Similarly, the proposal for the relocation of the UHF radio switchboard above the bulkhead deck on new and existing ships was not considered as further information on the type and extent of the inconvenient experienced were requested;
- clarify the application 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 emergency power redundancy on existing ships which might be achieved by fitting a second emergency diesel generator located in another main vertical zone from the main source of electrical power;
- re-evaluate the wide separation of compartments containing ship's essential systems (such as propulsion sets or main generators sets) in the light of the safe return to port (for new ships);
- consider onboard stability computer support or shore-based support for existing ships in case of flooding;
- consider limiting the number of down flooding points above the bulkhead deck;
- harmonize requirements set by Administrations by providing better guidance for determining whether the minimum number of embarkation ladders (one) on each side should be increased;
- reconsider the mandatory principles on evacuation routes to the embarkation deck
- consider technically justifiable proposals to raise the Required Subdivision Index 'R' and review other aspects deemed relevant (e.g., length of the ship, number of persons onboard);
- reconsider the adequacy of MSC.1/Circ.1380 "Guidance for watertight doors on passenger ships which may be opened during navigation".

Based on proposals from the International Chamber of Shipping and the Cruise Industry Operational Safety Review, MSC.1/Circ.1446 was revised to recommend:

- passenger lifejackets should be of a similar design;
- video for passenger emergency instruction notices and emergency information cards should be used;
- companies to investigate means of providing rolling motion data to the VDR;

- that bridge access control should be harmonized with bridge organization policies to avoid disruptions and distractions of bridge team members;
- that deviation from the voyage plan should follow the guidance of resolution A.893(21), ICS Bridge Procedures Guide;
- a thorough deck-by-deck inspection is carried out to identify and secure potentially hazardous heavy objects;
- bridge navigational procedures should be harmonized as much as possible across a Company's fleet; and
- that where lifejackets required in accordance with SOLAS are not stowed in the vicinity of muster/assembly stations, additional lifejackets should be stowed in that vicinity so as to be readily accessible for distribution in the event of an emergency.
- that arrangements are in order to ensure the lifejacket location is visible under all possible lighting conditions (as result of the Costa Concordia report).

### **Unified Interpretations**

The Committee approved several new Circulars, based on IACS proposals, containing unified interpretations concerning fire safety which clarify:

- Carriage requirements for portable gas measurement and detection instruments.
- Fixed fire detection and fire alarm system provisions for control stations on cargo ships.
- Arrangements of emergency fire pump suction and discharge piping within the machinery space.
- Protected locations of isolation valves fitted in the fire main at the poop front.
- Requirements on the use of carbon dioxide or inert gas systems required for self-heating solid bulk cargoes.
- Provisions for emergency exit hatches used to escape to the liferaft embarkation deck.
- Controls for releasing carbon dioxide and activating the alarm in the protected space.
- Requirements for the location of entrances, air inlets and openings in the superstructures and/or deckhouses of oil, chemical and gas carriers.
- Arrangement of water-based fixed fire-extinguishing systems in machinery space bilges.
- The extent of protection of load bearing structures on high speed craft (HSC).
- Use of fire-restricting materials for enclosed spaces and open cargo & ro-ro decks of HSC.

The Committee also approved several new Circulars which contain additional unified interpretations, based on IACS proposals, concerning:

- Technical provisions for means of access for close-up inspections and thickness measurements (MSC.158(78)) of oil tankers and bulk carriers.
- Compliance with the performance standards for water level detectors in cargo holds and ballast tanks of bulk carriers (MSC.145(77)).
- Acceptable service tank arrangements for main & auxiliary engines using heavy fuel oil and marine diesel oil necessary 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.

- Clarification of electrical auxiliary services necessary for maintaining the ship in normal operational (propulsion and steering, and safety of the ship) and habitable (minimum comfort) conditions without recourse to emergency source of electrical power.
- The means to achieve compliance with the required electrical power necessary to restore propulsion to the ship in conjunction with other machinery, as appropriate, from a dead ship condition within 30 minutes after blackout.
- Recommended standards for the design and testing of fall preventer devices fitted to lifeboats which are launched using on-load release hooks.
- Achieving compliance with the SOLAS requirement to sustain and restore normal operation of propulsion machinery in ECA's and non-ECA's when one of the fuel oil supply systems for boilers or engines becomes inoperative.
- The operational capabilities of the launching equipment in unfavorable conditions of trim and heel and arrangement of free-fall lifeboats onboard ships with respect to the lifeboat's launching height above the lightest seagoing condition.
- Surface preparation, 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.

#### **Alternative/Equivalent Design Approval Guidelines**

The Committee agreed to a set of voluntary Guidelines for accepting an alternative and/or equivalent design which provide a structured process that includes the methodology for analysis and approval. This process involves development of a preliminary design; approval of preliminary design; development of final design; final design testing and analyses; and approval. If the proposal is considered to provide a significant challenge to prescriptive rules/regulations/standards, hazard identification, risk assessment and testing and analyses should be undertaken. The final decision on accepting an alternative/equivalent design rests with the flag State after examining and concluding that risks have been reduced to an acceptable level.

Concern was raised on the lack of uniformity afforded in some parts of the Guidelines including the provision for the Administration to define the approval basis with respect to scope of analysis and evaluation criteria. However, this concern was balanced by the point that SOLAS already allows flag States to accept equivalent designs on their individual judgment.