

This Brief provides highlights of IMO's Maritime Safety Committee's 96<sup>th</sup> session, which met from 11 to 20 May 2016. A number of amendments to SOLAS were adopted which, under IMO's new four-year implementation cycle, will enter into force on 1 January 2020. A more extensive report, the ABS International Regulatory News Update, on MSC 96 will be released on receipt of the formal report of the Committee by IMO.

### Adopted SOLAS Amendments

The following amendments to SOLAS were adopted and will enter into force on 1 January 2020 except if indicated otherwise.

- Launching Appliances and Release Gear - Amendments to SOLAS Chapter III were adopted as resolution MSC.404(96) to mandate that the thorough examination, operational testing, overhaul required maintenance and repair of equipment specified within the regulation shall be carried out on/after 1 January 2020 in accordance with the specifications contained in new resolution MSC.402(96). This Resolution specifies that:
  - Manufacturer means the original equipment manufacturer (OEM) or any entity which has taken legal and legitimate responsibilities for equipment when the original equipment manufacturer no longer exists or supports the equipment.
  - A manufacturer must, upon verification of compliance with minimum capabilities, education and training, and quality system requirements, be authorized by the Administration as a *service provider* only if the service is provided for another manufacturer's equipment;
  - Annual thorough examinations and operational tests may be conducted by certified personnel of either the manufacturer or an authorized service provider or by the ship operator authorized by the Administration after demonstrating compliance with the requirements for a *service provider*;
  - Personnel who perform the annual thorough examinations and operational tests, five-year thorough examinations, any overhaul, overload operational tests and repair must be certified by the manufacturer or authorized by the Administration as a *service provider* for each make and type of the equipment to be service in accordance with the specified minimum capabilities, education and training, and quality system requirements.
  - The ship operator may perform the annual thorough examinations and operational tests, provided they are authorized by the Administration as a *service provider* for each make and type of the equipment to be service in accordance with the specified minimum capabilities and quality system requirements.

When the annual thorough examination, operational testing, overhaul and repair are completed, a statement confirming that the lifeboat arrangements remain fit for purpose is to be issued by the manufacturer or authorized *service provider* that conducted the work. A copy of valid documents of certification of personnel and authorization of the service provider as appropriate shall be included with the statement.

- Fire Systems Safety (FSS) Code – the Committee adopted a new Chapter 17 of the FSS Code, included in resolution MSC.403(96), which contains specifications for foam firefighting appliances for the protection of helicopter facilities on new SOLAS certified ships and new MODUs certified under the 2009 MODU Code that are constructed on/after 1 January 2020. In this regard, MSC.1/Circ.1523 has been approved for the early implementation of this new FSS Code chapter. The specifications reflect those contained in MSC.1/Circ.1431 which will be revoked as the new Chapter 17 has been adopted.
- ESP Code – The Enhanced Survey Program Code was amended by resolution MSC.405(96) to refer to recommendations for entering enclosed spaces aboard ships set forth under resolution A.1050(27), so as to promote safe access by surveyors carrying out the surveys on oil tankers and bulk carriers on/after 1 January 2018.

- Marine Evacuation analysis for passenger ships – Amendments to SOLAS II-2/13.3.2 were adopted, contained in resolution MSC.404(96), to mandate the evaluation of escape routes by an evacuation analysis early in the design process for passenger ships other than ro-ro passenger ships carrying more than 36 passengers constructed on or after 1 January 2020. The amendments also include the existing requirement relative to the evaluation of escape routes for ro-ro passenger ships constructed on or after 1 July 1999. In this regard, escape routes evaluated by an evacuation analysis, in accordance with SOLAS regulation II-2/13.7.4 or the earlier SOLAS regulation II-2/28-1.3, need not be re-evaluated. Revised Guidelines on evacuation analyses for passenger ships were approved through a new MSC.1/Circ.1533.

### **Goal-based ship construction standards**

Pursuant to the new SOLAS regulation that requires new single side skin bulk carriers (excluding ore carriers and combination carriers) of 150m in length, and above, and oil tankers of 150m in length, and above to be designed and built to class society's rules that have been verified by the IMO to meet the new Goal-based ship construction standards (GBS), the Committee considered the IMO Verification Audits and the Action Plans being implemented by IACS which address the non-conformities identified by the Audits.

Commencing in December 2013, Classification Societies each submitted its own GBS rule package to demonstrate compliance with the functional requirements as set out in the GBS (resolution MSC.296(87)). These rule packages apply to new oil tankers and bulk carriers are those ships:

- for which the building contract is placed on or after 1 July 2016;
- in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 July 2017; or
- regardless of the contract or keel laying date, the delivery of which is on or after 1 July 2020.

The Committee concluded that the Rules submitted by each of the 12 IACS Member Societies conform to the goals and functional requirements of the Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers and issued MSC.1/Circ.1518 to this effect. The Circular also advises that:

- non-conformities identified by the IMO Verification Audits, which are currently being rectified by IACS, are to be subject to a verification audit; and
- observations identified in by the IMO Verification Audits are to be addressed by each IACS Member and submitted to IMO.

### **Approved SOLAS Amendments**

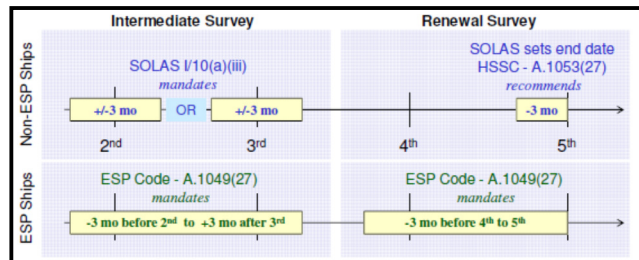
The following amendments to SOLAS and associated instruments were approved and, subject to adoption at MSC 97 in November 2016, are expected to enter into force on 1 January 2020.

Intact Stability Code (anchor-handling) - the non-mandatory provisions of part B were revised as a consequence to the amendments to the introduction of the 2008 IS Code regarding vessels engaged in anchor-handling operations. In addition to specifying a minimum stern freeboard during these operations, minimum thresholds are provided for the magnitude and area of the righting lever curve relative to the heeling lever curve caused by the vertical and horizontal components of the anchor-handling wire tension. A comprehensive operational plan should be developed for each anchor-handling operation. These draft amendments to the 2008 IS Code relating to ships engaged in anchor handling operations, together with the draft amendments relating to vessels engaged in lifting and towing operations, including escort towing were approved and will be consolidated for adoption at the MSC 97 session.

Watertight doors – SOLAS II-1/22 was revised to remove two of the provisions for determining when certain watertight doors may be permitted to remain open during navigation. Doors that needed to be open for the safe and effective operation of the ship's machinery and to permit unrestricted access throughout the passenger area are no longer permitted under this regulation on the basis of current technologies for door operation. Associated guidance is contained in MSC.1/Circ.1506 for determining which watertight doors on passenger ships may be opened only if absolutely necessary during navigation. The draft amendments to the regulation were approved with a view to adoption at MSC 97.

Butterfly Valve - SOLAS II-1/12 was revised to allow the use, in cargo ships, of a butterfly valve suitably supported by a seat or flanges and capable of being operated from above the freeboard deck in lieu of a screw-down valve when the collision bulkhead is pierced for dealing with fluid in the forepeak tank.

Survey Harmonization – new SOLAS regulation XI-1/2-1 revises renewal survey periods of cargo ships not subject to the ESP Code so as to be harmonized with the ESP. The graphic to the right illustrates the current survey windows for ESP and non-ESP ships. Intermediate surveys will be addressed under the HSSC Guidelines.



Foam-type fire extinguishers - SOLAS II-2, regulation 10 was revised to specify that there is no need to provide 135 l wheeled foam-type extinguishers in machinery spaces of category A containing oil-fired boilers protected by fixed water-based local application fire extinguishing systems. This takes into account that a sufficient safety performance level is achieved as compared with the 135 l wheeled foam-type extinguisher. In addition to the approval of the amendments, a MSC circular for the early implementation of this amendment was agreed. In this regard, the amendments were approved for adoption and a circular agreed for approval at MSC 97.

IGC Code – Fire Rating of Wheelhouse Windows – the Committee approved, subject to adoption at MSC 97, paragraph 3.2.5 of the IGC Code that, in effect, aligns the requirements of the IGC Code with the requirement for fire-rated windows facing the cargo area on tankers in SOLAS II-2. As a consequence, the fire rating requirements would not apply to wheelhouse windows. Taking into account for the lack of availability of such windows meeting A-0 fire-rating under the current paragraph 3.2.5 of the IGC Code (MSC.370(93)), which will apply to new gas carriers constructed on/after 1 July 2016, the Committee agreed to further consider a draft MSC circular at its next session which encourages early implementation of the draft amendments to the IGC Code approved at this session.

Damage Control Drills – revisions to SOLAS regulations III/30 and III/37 will require all passenger ships to conduct damage control drills for flooding emergencies, as required under draft new SOLAS regulation II-1/19-1 also approved at this session (see next item).

Subdivision and Damage Stability - amendments to SOLAS II-1, applicable to new cargo and passenger ships, were approved, subject to adoption at MSC 97, with an expected entry into force date of 1 January 2020.

The amendments include:

- Clarification and revision of a number of definitions
- Revisions to the conditions for calculating the attained subdivision index A and factor  $s_i$
- Revision of the requirements for well arrangements in double bottoms in cargo ships other than tankers
- The acceptance of with a butterfly valve suitably supported by a seat or flanges and capable of being operated from above the freeboard deck in lieu of a screw-down valve in the pipe(s) piercing the collision bulkhead in cargo ships.
- A new regulation for periodic damage control drills on new and existing passenger ships for the crew and for those onboard personnel with damage control responsibilities.

### Miscellaneous

Early Implementation on Use of Butterfly Valves – the Committee approved in principle, an MSC Circular which encourages early implementation of draft amendments to Regulation 12 of SOLAS Chapter II-1 allowing for the use of a butterfly valve in the pipe(s) piercing the collision bulkhead in cargo ships. Such valves would need to be suitably supported by a seat or flanges and capable of being operated from above the freeboard deck. Final approval of the Circular is set to occur at MSC 97 in conjunction with the adoption of the draft SOLAS Chapter II-1 amendments.

Safe Return to Port – new MSC.1/Circ.1532 was issued containing revised guidelines concerning the use of stability software by masters of passenger ships for safe return to port.

Verified Gross Mass (VGM) of Packed Containers – The Committee issued a new Circular recommending that flag and port State control Authorities adopt a practical and pragmatic approach when verifying compliance with the SOLAS Chapter VI requirements. The Circular recommends to Administrations, port State control Authorities, ship operators, port terminals and masters that, for a period of three months after the 1 July 2016 entry into force of the SOLAS Chapter VI amendments:

- packed containers loaded on a ship before 1 July 2016 and are transhipped on or after 1 July 2016 may be allowed to be shipped to their final port of discharge without the gross mass being verified as per SOLAS VI/2.4 to VI/2.6; and
- flexibility be exercised in accepting the means for documenting, communicating and sharing VGM information.

Guidance on maritime cybersecurity – the Committee approved a new MSC.1/Circ.1526 providing Interim Guidelines on maritime cyber risk management. The Guidelines are particularly effective in emphasizing:

- that the risks associated with cyber are not independent of the current range of physical risks and an integrated approach to deal with both is required
- technical standards alone will be insufficient in addressing the risk
- the need for an appreciation of the difference between Information Technology and Operational Technology where control of physical equipment and processes are affected
- the significance of unintended consequences due to benign actions and procedural lapses rather than malicious attacks
- the broad range of seemingly disparate systems that are involved/affected

It is acknowledged that the Interim Guidelines are likely to change next year but it is not anticipated that this will affect the technical content. Instead it should add implementation aspects, particularly where the ships' systems interact with the systems belonging to shore based facilities, aiming to ensure that no divergence or contradictions will be introduced and the industry will find the information it needs in one source.

#### **STCW 1978, Amendments**

The Committee approved amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978. On entry into force on 1 July 2018, the amendments:

- require masters, chief mates and officers in charge of a navigational watch on ships operating in “*open waters*” in Arctic waters and/or the Antarctic area (i.e. Polar Waters) to hold a certificate in basic training for ships operating in Polar Waters after satisfactorily completing approved basic training and meet the specified standard of competence.
- require masters and chief mates on ships operating in Polar Waters, to hold a certificate in advanced training for ships operating in Polar Waters, other than “*open waters*” after satisfactorily:
  - meeting requirements for certification in basic training for ships in Polar Waters
  - completing at least two months of approved seagoing service in the deck department, at management level or while performing watchkeeping duties at the operational level; and
  - completing approved advanced training for ships operating in Polar Waters and meet the specified standard of competence
- provide for transitional provisions which allow seafarers, who commenced approved seagoing service in Polar Waters prior to 1 July 2018, to meet alternative basic training or advanced requirements by 1 July 2020.

Masters and deck officers on ships operating in Polar Waters are required to demonstrate competence in:

- Contribute to safe operation and maneuvering of vessels operating in Polar Waters
- Monitor and ensure compliance with legislative requirements
- Apply safe working practices, respond to emergencies
- Ensure compliance with pollution- prevention requirements and prevent environmental hazards
- Planning and conducting a voyage in Polar Waters
- Manage the safe operation of vessels operating in Polar Waters
- Maintain safety of the ship's crew and passengers and the operational condition of life-saving, firefighting and other safety systems

The approved amendments related to the Polar Code and those related to passenger ship-specific training will be a consolidated set of draft amendments to the 1978 STCW Convention and the corresponding parts of STCW Code, accordingly, for subsequent adoption at MSC 97.

## Unified Interpretations

The Committee approved several MSC Circulars containing Unified Interpretations on the following items:

FSS Code - Specific guidance is provided under new MSC.1/Circ.1528 for:

- the number of setting points to the discharge control for fixed gas fire-extinguishing systems;
- the foam-generating capacity of fixed foam fire-extinguishing systems so as to ensure sufficient foam capacity is available by providing the minimum design filling rate so as to be adequate to completely fill the largest protected space within 10 min; and
- the need for fitting an additional indicating unit in cargo control rooms (e.g. ship's office, machinery control room).

Materials other than steel - may be used on engine, turbine and gearbox installations for applications specified in new MSC.1/Circ.1527 provided an assessment in relation to the risk of fire associated with the component and its installation. The circular also provides clarification on arrangements for fixed hydrocarbon gas detection systems in double hull and double bottom spaces of oil tankers, and use of non-combustible material equivalent to steel for ventilation ducts.

Corrosion resistant material - specific guidance is provided in new MSC.1/Circ.1529 on the use of corrosion resistant material for components of the hook unit, release handle unit, control cables or mechanical operating links and the fixed structural connections in a lifeboat.

RO-RO Space Alarms – clarification is provided in new MSC.1/Circ.1530 on the application of the general emergency alarm and public address system in ro-ro spaces on cargo ships.

Helicopter Landing Areas – The interpretations in MSC.1/Circ.895 were revised by new MSC.1/Circ.1524 to allow for a foam application system complying with the provisions of the new FSS Code Chapter 17 to be used in lieu of a foam system comprised of monitors and two dual-purpose nozzles (jet/spray) with hoses of adequate length.

Downflooding via Ventilators – several Circulars issued contain the clarification that machinery space ventilators fitted with weathertight closing appliances, which are required to remain open to supply air to the engine room or emergency generator room (if the same is considered buoyant in the stability calculation or protecting openings leading below) for the effective operation of the ship, are to be considered as a point of down-flooding when evaluating compliance with stability requirements.

Steering Gear Tests – A new MSC.1/Circ.1536 was issued which defines the methods for predicting steering gear performance required by SOLAS based on trial data taken in the ballast condition where impractical to conduct the test at the deepest seagoing draught.

Coating Protection – A new MSC.1/Circ.1539 was issued clarifying that the following two types of tanks are not considered to be dedicated seawater ballast tanks and should, therefore, not be subject to the Performance Standard for Protective Coatings (resolution MSC.215(82)):

- seawater ballast tanks in passenger ships that are also designated for the carriage of grey water or black water; and
- seawater ballast tanks in livestock carriers also designated for the carriage of livestock dung.

Means of Access – based on IACS Members' experience gain in implementing the safe means of access provided in SOLAS II-1/3-6, a new MSC.1/Circ.1545 was issued clarifying the arrangement of adjacent sections of vertical ladders through a linking platform which gives access to cargo holds of bulk carriers. This Circular updates MSC.1/Circ.1464.

Tonnage Calculation – A new MSC.1/Circ.1546 was issued which clarifies that the volume of heat exchangers fitted in hull recesses or outside of the hull should not be included in the total volume of all enclosed spaces.