International Regulation News Update

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Maritime Safety Committee's 98th Session

7 to 16 June 2017

(+ "ships" are all self-propelled vessels)

The IMO Maritime Safety Committee held its 97th session from June 7 to 16, 2017. A complete revision of SOLAS Chapter II-1 was adopted as were revisions to the fire protection requirements in SOLAS Chapter II-2. Several mandatory and non-mandatory Codes as well as numerous unified interpretations were also approved at this session.

ADOPTED SOLAS AMENDMENTS

Complete Revision of SOLAS II-1

The Committee adopted resolution MSC.421(98) which contains a complete revision of SOLAS Chapter II-1. Except where indicated otherwise, the revision applies to cargo and passenger ships:

- with a building contract placed on or after 1 January 2020; or
- in the absence of a building contract, the keel of which is laid or is at a similar stage of construction on or after 1 July 2020; and
- regardless of the building contract or keel laying date, the delivery is on or after 1 January 2024.

This revision includes the following:

- approval of minimum metacentric height (GM), or maximum center of gravity (KG), curves or tables are to be accompanied by corresponding maximum permissible trim versus draught values
- passenger ships are required to meet a higher degree of subdivision, as per the revised subdivision index R which now varies depending on the number of persons onboard (<400, ≤1350, ≤6000 and >6000)
- revised limits of heel for cargo ships fitted with cross-flooding devices in determining the maximum righting arm and righting arm area for checking the probability factor to survive intermediate flooding
- calculation of the probability factor to survive in the final equilibrium stage of flooding
- revised minimum double bottom protection (*h*/2 or 500 mm) for small wells used for lubricating oil under main engines and for other wells used for drainage are now accepted provided the ship can withstand specified damage extents and the flooding does not render emergency power and lighting, internal communication, signals or other emergency devices inoperable in other parts of the ship.
- slight adjustments of several definitions (draft, trim and, for passenger ships, the bulkhead deck)
- acceptance of butterfly valves, suitably supported by a seat or flanges and capable of being operated from above the freeboard deck, in lieu of screw-down valves in piping on cargo ships, which pierces the collision bulkhead for dealing with fluid in the forepeak tank

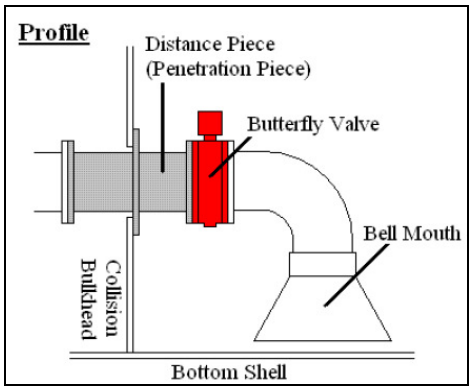

Figure 1 - Typical Butterfly Valve Arrangement

The Committee, noting that this requirement will not enter into force until January 1, 2020, adopted MSC.1/Circ.1567 which invites Member States to take action as appropriate. This action may include early acceptance of a butterfly valve as an equivalent to a screw-down valve in piping, which pierces the collision bulkhead on cargo ships, pending formal entry into force.

- on completion of loading of all passenger ships, the master is to ascertain and record that the ship's loading condition complies with the relevant stability criteria.
- for passenger ships with a length ≥ 91.5 m, additional conditions of flooding (the three loading conditions used to calculate the attained subdivision index A as per revised regulation 8) are also required to be applied when checking that at least one powered bilge pump is available after flooding
- conditions for opening watertight doors during navigation in all passenger ships are revised.
- specifications for carrying out damage control drills on all passenger ships is now contained in new regulation 19-1. The drills are to take place at least every three months by at least those crew members assigned with damage control responsibilities.

In light of the extensive revisions to subdivision and damage stability regulations in SOLAS chapter II-1, the Committee also adopted resolution MSC.429(98) which revises the corresponding Explanatory Notes for the revised SOLAS chapter II-1.

SOLAS II-2 Fire Protection Amendments

Adopted resolution MSC.421(98) also contains revisions to fire protection requirements under SOLAS Chapter II-2:

- cargo spaces arranged on all types of ships used for the transport of motor vehicles:
  (a) with fuel in their tanks for their own propulsion, that are loaded/unloaded into cargo spaces which do not meet SOLAS II-2, regulation 20 on the "*Protection of vehicle, special category and ro-ro spaces*"; and
  (b) that do not use their propulsion within the cargo space in which they are loaded;
  are not required to comply with SOLAS II-2/20 provided the vehicles are carried in spaces that comply with the appropriate requirements of regulation 19 and the IMDG Code, as defined in SOLAS VII/1.1, as of 1 January 2020.
- windows (on passenger ships constructed on or after 1 January 2020 and which carry not more than 36 passengers) which face survival craft, escape slides, embarkation areas and windows situated below these areas are to be at least comply with "A-0" class requirements.

OTHER ADOPTED AMENDMENTS

IGC Code Amendments

Similar to the revisions of the IGC Code adopted as MSC.411(97), revisions of the International Gas Fuel (IGF) Code were adopted by resolution MSC.422(98). On entry into force on 1 January 2020, the requirement for A-0 class divisions of boundaries, including navigation bridge windows, above the navigation bridge deck, will be rescinded.

Taking into account that the amendments are scheduled to enter into force in just over two years on 1 January 2020, a new MSC.1/Circ.1568 was adopted and invites Member States to take action, which may include early application, pending formal entry into force.

LSA Code Amendments

The Committee adopted resolution MSC.425(98) which corrects an inconsistency concerning the load and factor of safety to be applied to winches, including winch structural components, and winch brakes. The static tests and proof load tests to be applied as of 1 January 2020 to life boat launching appliance components, including their structural members and winches, and the winch brakes.

IMSBC Code Amendments

Amendments under resolution MSC.426(98) enter into force on 1 January 2019, and explicitly assign the shipper with the responsibility to ensure that the test for determining the transportable moisture limit (TML) of a solid bulk cargo has been carried out within six months prior to the date of loading of such bulk cargo.

Additionally, a maximum interval between sampling/testing for the moisture content of solid bulk cargo and the commencement of loading is not to be more than seven days so as to ensure that the moisture content of the cargo is less than its TML.

Finally, six additional solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted have been identified and added to the list published as MSC.1/Circ.1395/Rev.3:

- Monoammonium Phosphate;
- Monocalciumphospate (MCP),
- Sand,
- Mineral Concentrate,
- Radioactive Material
- Low Specific Activity (LSA-I) UN 2912.

HSC Code Amendments

The 1994 and 2000 HSC Codes, both of which are mandatory under SOLAS Chapter X, were revised by the adoption of resolutions MSC.423(98) and MSC.424(98), respectively.

The revisions allow for an exemption of high-speed craft less than 20 m (under the 1994 Code) and 30 m (under the 2000 Code) in length, from carrying a rescue boat. The exemption is conditional in that arrangements are to be available to allow the craft to maneuver in the worst intended conditions to rescue a person from the water in a near-horizontal body position and that the rescue can be observed from the craft's navigating bridge.

Taking into account that the above amendments are scheduled to enter into force in just over two years' time, on 1 January 2020, a new MSC.1/Circ.1569 was adopted and invites Member States to take action, which may include early application, pending formal entry into force.

Revised MODU Code

In light of independent marine investigation reports concerning the explosion, fire and sinking of the MODU Deepwater Horizon in April 2010, and the identified vulnerabilities due to hydrocarbon fires emanating from drilling operations, the Committee adopted resolution MSC.435(98) which revised the 2009 MODU Code. The revisions:

- address the maintenance of operational control over the integrity of the well and station-keeping capability;
- address the maintenance and repair of hazardous area certified equipment
- revise the A-60 requirement for exterior boundaries of superstructures and deckhouses enclosing accommodation, including any overhanging decks which support such accommodation to be meet an "H-60" explosion-proof standard;
- require bulkheads and decks of service spaces, accommodation spaces, control stations and spaces containing vital machinery and equipment located adjacent to hazardous to be of "H-60" explosion-proof construction if such areas are exposed to a radiant heat flux in excess of 100 kw/m,;
- require a deluge system and enhanced fire-extinguishing arrangements for the drill floor;
- increase the average body mass of the lifeboat occupants from 82.5 to 95 kg when applying the provisions of the LSA Code to survival craft;
- no longer allow lifeboat to be accepted as a rescue boat;
- require quarterly abandonment drills to include lowering of a davit-launched liferaft; and
- require the use of certified equipment in hazardous area zone 0, zone 1 or zone 2.

APPROVED SOLAS AMENDMENTS

The following amendment to SOLAS were approved and, subject to adoption at MSC 99 in May 2018, is scheduled to enter into force on 1 January 2020.

Stability Support

Amendments to SOLAS II-1/8-1 require that the master on existing passenger ships constructed before 1 January 2014, be provided with on-board or shore-based computerized stability support to comply with the SOLAS requirements for *safe-return-to-port* after a flooding casualty not later than the first renewal survey after of January 1, 2020.

SOLAS II-1/8-1 has already been revised in 2012 by resolution MSC.325(90) to require passenger ships constructed on or after 1 January 2014, to comply with these provisions. Guidelines on the computerized stability support are currently under development.

MISCELLANEOUS

The Committee took action on additional regulation as discussed below.

Abandonment Drills

New MSC.1/Circ.1578 approved Guidelines for planning and carrying out on-board lifeboat abandonment drills. Included are essential steps to safely carry out simulated launching of free-fall lifeboats which is permitted in accordance with SOLAS Chapter III. Numerous existing circulars on measures to prevent accidents with lifeboats are reflected in MSC.1/Circ.1578 in order to be more user-friendly.

Damage Control Plans

Amendments to the Guidelines for Damage Control Plans and Information to the Master, MSC.1/Circ.1245, for passenger ships were approved and issued as MSC.1/Circ.1570. The amendments provide additional detail for depicting access points to compartments and for the clear depiction of essential information regarding the ship's watertight subdivision and related equipment.

DP Operator Training

The Committee approved Rev.2 of MSC.1/Circ.738, which contains Guidelines reflecting recognized industry standards for the training, competence and experience for identified key DP personnel on dynamically positioned (DP) vessels and units. Rev.2 references the guidelines issued by the International Marine Contractors' Association (IMCA) and is available at: www.imca-int.com.

Goal-Based Standards

The Committee acted on the conditions contained in MSC.1/Circ.1518, which confirmed that the Rules of the IACS Members, including ABS, conform to the International goal-based ship construction standards for bulk carriers and oil tankers (GBS Standards) under SOLAS II-1/3-10.3, provided the identified non-conformities are rectified. The Committee reviewed IMO's verification audit report of the rectifications submitted by IACS on the non-conformities and concluded that the non-conformities had been satisfactorily rectified.

Work continued on enhancing the GBS Guidelines based on experience gained during the initial and rectification audits. Part A is nearly complete and, although progress was made, work on Part B will continue over the next two sessions of the Committee with the view to finalization at MSC 100 in November 2018.

New OSV Chemical Code

A draft Assembly resolution on the Code for the Transport and Handling of Hazardous and Noxious Liquid Substances in Bulk on Offshore Support Vessels (OSV Chemical Code) was approved by the Committee.

This new Code will be submitted to the 30th Session of the Assembly for adoption in December 2017 and, if adopted, will apply to OSVs with keel laying date on or after July 1, 2018.

This new Code supersedes the Guidelines for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk on offshore support vessels contained in resolution A.673(16). Relative to resolution A.673(16), the following provides a general comparison of revisions. The new Code:

- does not contain a specific cargo list, as had been provided by resolution A.673(16), but allows OSVs to carry the following offshore-related products including any mixtures of them:
  - only those offshore-related products listed in chapters 17 or 18 of the IBC Code and the latest edition of the MEPC.2/Circular and their related references to chapters 15 & 19;
  - oil-based/water-based mud containing mixtures of products listed in chapters 17 & 18 of the IBC Code and MEPC.2/Circular;
  - liquid carbon dioxide (having high purity and reclaimed quality characteristics); and
  - liquid nitrogen contaminated backloads
- no longer limits the quantity of cargo that can be carried, but specifies conditions for the quantity of cargo to be carried. In particular, the standard of subdivision to be met is probabilistic and/or deterministic damage stability depending on the length of the OSV and the amount and type of product intended to be carried (see Table 1).

OSV Code Para	OSV Length (m)	Product Amount (m^3)		Damage 2.6.1: Side&Btm 2.6.2: Side only
		Type 1	Type 2 or 3	
2.7.1	> 0	> 150		2.6.1 anywhere
2.7.2	> 150	0	> 1200	2.6.1 anywhere
2.7.3	≤ 150	≤ 150	> 1200	2.6.1 anywhere except ER Bhds
2.7.4	> 100	≤ 150	800 ≤ X ≤ 1200	2.6.2 anywhere and SOLAS Probabilistic
2.7.5	≤ 100	≤ 150	800 ≤ X ≤ 1200	2.6.2 anywhere
2.7.6	> 100	≤ 150	< 800	2.6.2 anywhere between-T.Bhds and SOLAS Probabilistic
2.7.7	≤ 100	≤ 150	< 800	2.6.2 between T.Bhds

Table 1 – Extent of Damage Parameters

- provides more details for cargo piping-systems and components, including minimum wall thickness;
- contains provisions for the carriage of products assigned Ship Type 2 in Chapter 17 of the IBC Code on-board existing OSVs with keel laying date on or after 1 April 1990 but before 1 July 2018. Currently, A.673(16) does not have provisions to carry these products unless the OSV fully meets the IBC Code;
- supports the issuance of one certificate, the Certificate of Fitness, for all products upon satisfactory completion of the initial survey. Validity of the Certificate is subject to the annual, intermediate and renewal surveys required by the IBC and IGC Codes and MARPOL Annex II. Currently, A.673(16) allows the issuance of a MARPOL Annex II certificate for products having only a marine pollution hazard in lieu of a Certificate of Fitness; and
- contains guidance to determine the type of backload, in addition to the analysis form that must be completed prior to loading this type of product.

PSC Guidelines (Hours of Rest)

The Committee approved revisions to the Port State Control (PSC) Guidelines on certification of seafarers, hours of rest and manning. Subject to adoption at the 30th Assembly in December 2017, the Procedures for PSC (resolution A.1052(27)) will:

- include details the certificates/documents and their endorsements to be examined;
- provide the basis to check for the minimum hours of rest in the watch schedule and records of rest; and
- contain examples where clear grounds exist to carry out a more detailed inspection.

NEW INITIATIVES

Cyber Risk Management

The Committee adopted recommendations by resolution MSC.428(98) on the implementation of cyber risk management, which takes into account that safe operational practices in ship operation should identify risks and establish appropriate safeguards to ships, personnel and the environment under the ISM.

The resolution affirms that an approved safety management system should take into account cyber risk management and encourages Administrations to ensure that cyber risks are appropriately addressed in safety management systems no later than the first annual verification of the company's Document of Compliance after January 1, 2021.

ABS, which currently holds the chair of the new IACS Cyber Panel, presented to more than 130 Delegates an overview of the work being undertaken in IACS and in an IACS-led Industry Working Group to increase operational resilience to cyber security threats to systems that control or monitor physical processes aboard ships

Autonomous Ships

The Committee considered a proposal on how IMO instruments might be revised to address the complex issue to ensure safe, secure and environmentally sound operation of Maritime Autonomous Surface Ships (MASS), including interactions with ports, pilotage, responses to incidents and marine pollution. It was considered essential to maintain the reliability, robustness, resiliency and redundancy of underlying communications, software and engineering systems.

As a starting point, the Committee agreed to start a regulatory scoping exercise over the next four sessions of the Committee, until 2020, which would take into account the different levels of automation, including semi-autonomous and unmanned ships.

Low Flashpoint Fuels

The Committee discussed issues surrounding safety aspects related to low-sulfur fuel oils (specifically 0.50% m/m) being supplied to ships that were reported to have, in certain instances, flash points less than the SOLAS minimum threshold of 60° C.

The Committee recognized that, under SOLAS, the use of low-flashpoint fuel oil is subject to an engineering analysis based on Guidelines on alternative design and arrangements for SOLAS chapters II-1 contained in MSC.1/Circ.1212 to comply with the functional requirements of the Code of Safety for Ships Using Gases or Other Low-Flashpoint Fuels, IGF Code.

Notwithstanding the foregoing, the Committee:

- invited the submission of specific proposals addressing safety issues related to the use of fuel oil having flashpoints less than 60º C within the scope of the IGF Code to the Sub-Committee on Carriage of Cargoes and Containers in order to be fully prepared for the 1 January 2020 entry into force of the 0.50% sulfur cap on fuel oil;
- expanded the work program of the Sub-Committee on Pollution Prevention and Response to prepare a justification and scope of work for a new output on what additional measures may be developed to promote consistent implementation of the 0.50% global sulfur limit; and
- noted the support provided several Delegations for a proposal to revise the contents of the bunker delivery note to include the flashpoint value so as to be in line with MARPOL VI/18 concerning fuel oil quality, and that it is to not *jeopardize the safety of ships or adversely affects the performance of the machinery*. However, no further action was taken at this time.

UNIFIED INTERPRETATIONS

The Committee approved the following MSC Circulars which provide unified interpretations to SOLAS. Many of the interpretation are based on Unified Interpretations submitted by IACS.

Means of Drainage

New MSC.1/Circ.1571 clarifies the drainage arrangement from enclosed cargo spaces on the bulkhead deck of a passenger ship and on the freeboard deck of a cargo ship.

Such drainage may be led to suitable spaces below the abovementioned decks provided such drainage is arranged in accordance with the provisions of regulation 22(2) of the International Convention on Load Lines, 1966, or the 1988 Protocol, as applicable. MSC.1/Circ.1571 also clarifies the means of closure for accesses that lead to spaces below the bulkhead deck on ro-ro passenger ships.

Means of Access

MSC.1/Circ.1572 consolidates the unified interpretations of the means of access to tanks and space which were contained in MSC.1/Circ.1464/Rev.1, MSC.1/Circ.1507 and MSC.1/Circ.1545. A new IACS Unified Interpretation on vertical ladder access arrangements arranged in way of a linking platform was included. Distances A and B, shown in Figure 2 are provided.

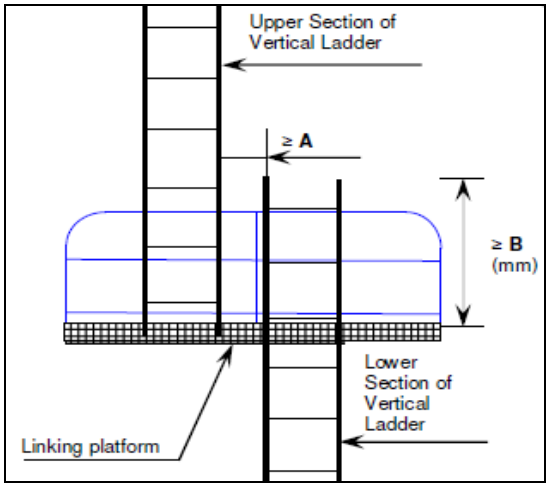

Figure 2 – Access Ladder/Platform

The Committee revised, and issued as, MSC/Circ.686/Rev.1, which provides recommendations for accessing tanks, cargo holds and ballast spaces of oil tankers and bulk carriers to enable the hull structure to be examined in a safe and practical manner. The provisions are applied when performing the overall and close-up surveys, as required by the Enhanced Program of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 (2011 ESP Code).

Portable Gas Detection

MSC.1/Circ.1581 clarifies that the suitable means for calibrating the portable instruments, required by SOLAS Regulation II-2/4.5.7.1 adopted as MSC.291(87), to measure flammable vapor concentrations onboard all oil tankers (new and existing) may be provided on board or ashore in accordance with the manufacturer's instructions. This calibration does not include any pre-operational accuracy tests recommended by the manufacturer.

Lifeboat Connections

New MSC.1/Circ.1584 provides a method to assess if fixed structural connections and supporting structures (backing plates and bolts) that are not made of corrosion-resistant material are in a good condition and therefore not subject to replacement. As a minimum, 100% visual examination of all components including removal of 25% of bolts for each hook is recommended. Non-destructive testing is to be carried out for material with 2% loss from original dimensions.

COLREG Sidelights

New MSC.1/Circ.1577 provides a new unified interpretation on the placement of sidelights onboard ships. When design difficulties with the placement of sidelights according to annex I/9(a)(i) and annex I/10(a)(i) of COLREG 1972 are encountered, the unified interpretation provide a realistic arrangement (see Figure 3) to comply with the required minimum visibility for the vertical and horizontal sectors specified by the COLREG 1972, as amended.

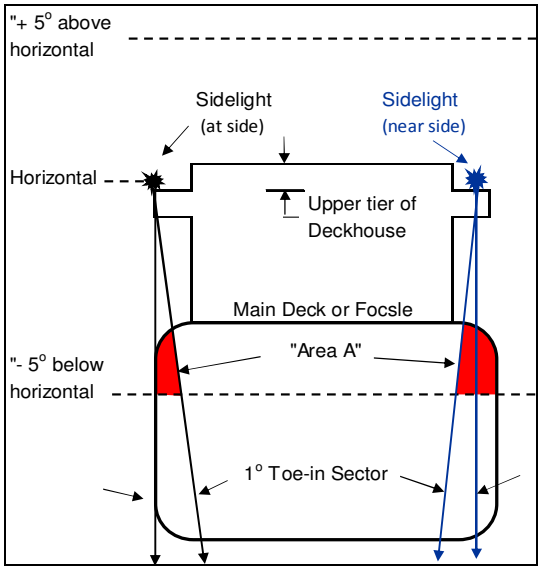

Figure 3 – COLREG Sidelight Interpretation

Inert Gas Systems

MSC.1/Circ.1582 clarifies several provisions for inert gas systems (IGS) required by revised Chapter 15 of the FSS Code (resolution MSC.367(93)). The interpretations address the means for providing:

- automatic shutdown of the inert gas system and its components;
- operational status of stop valves in branch piping; and
- independent oxygen sensor alarm system for low pressure, high pressure and the pressure indicator/recorder.

Portable Fire Extinguishers

The Committee revised, and issued as MSC.1/Circ.1275/Corr.1, the guidance on the number and arrangement of portable fire extinguishers within ro-ro spaces and vehicle spaces. This corrected circular specifies that such extinguishers are to be spaced not more than 20 m apart on both sides of the space at each deck level in each hold or compartment where vehicles are carried.

FRP Structures

New MSC.1/Circ.1574 provides interim guidelines when approving alternative designs and arrangements employing Fiber Reinforced Plastic, FRP, elements in ship structures in accordance with SOLAS regulation II-2/17. These guidelines aim to ensure that a consistent approach is applied in order to maintain the level of fire safety afforded by the provisions of SOLAS chapter II-2. The Guidelines supplement MSC.1/Circ.1455, MSC.1/Circ.1002 and MSC.1/Circ.1552.