**98th session of the IMO Maritime safety Committee (MSC98)**

**7 to 16 June 2017**

***Mandatory instruments***

The following amendment should be deemed to have been accepted on 1 July 2019 and enter into force on 1 January 2020:

Resolution MSC.421(98) Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended;

Resolution MSC.429(98) – Revised Explanatory notes to the SOLAS chapter II-1 subdivision and damage stability regulations;

Resolution MSC.422(98) – Amendment to the International code of safety for ships using gases or other low-flashpoint fuels (IGF code);

Resolution MSC.423(98) – Amendments to the International code of safety for high-speed craft, 1994 (1994 HSC code);

Resolution MSC.424(98) – Amendments to the International code of safety for high-speed craft, 2000 (2000 HSC code);

Resolution MSC.425(98) – Amendments to the International life-saving appliance (LSA) code;

Resolution MSC.426(98) – Amendments to the International maritime solid bulk cargoes (IMSBC) code.  The following amendment should be deemed to have been accepted on 1 July 2018 and enter into force on 1 January 2019. Governments may apply the amendments from 1 January 2018 on a voluntary basis:

• Amendments to paragraphs 4.5.1 and 4.5.2 of the IMSBC Code, highlighting the responsibility of the shipper for ensuring that a test to determine the transportable moisture limit (TML) of a solid bulk cargo is conducted;

• Amendments related to the classification and declaration of cargoes that will be identified as harmful to the marine environment (HME).

***Non-mandatory instruments approved by MSC 98:***

Resolution MSC.427(98) – amendments to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70), as amended)  - alignment of the relevant provisions of the Revised recommendation on testing of life-saving appliances with the associated amendments to the LSA Code adopted by resolution MSC.425 (98).

MSC.1/Circ.1564 - Revised guidance for watertight doors on passenger ships which may be opened during navigation - Member States are invited to apply the annexed Revised guidance to passenger ships constructed on or after the date of entry into force of the associated amendments to SOLAS regulation II-1/22 (Resolution MSC.421(98)).

MSC.1/Circ.1395/Rev.3 - Lists of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted or for which a fixed gas fire-extinguishing system is ineffective - this is a consequential amendment to MSC.1/Circ.1395/Rev.2, in relation to the draft amendments (04-17) to the IMSBC Code (MSC.426(98)).

MSC.1/Circ.1566 - Voluntary early implementation of amendments to SOLAS regulations II-2/1 and II-2/10, adopted by Res.MSC.409(97) -  Regulation 10 – paragraph 5.1.2.2 : in the case of domestic boilers of less than 175 kW, or boilers protected by fixed water-based local application fire-extinguishing systems as required by paragraph 5.6, an approved foam-type extinguisher of at least 135 l capacity is not required;

MSC.1/Circ.1567 - Notification of amendments to SOLAS regulation II-1/12.5.1;

MSC.1/Circ.1568 - Notification of an amendment to paragraph 11.3.2 of the IGF Code;

MSC.1/Circ.1569 - Notification of amendments to paragraphs 8.10.1.5 and 8.10.1.6 of the 1994 and 2000 HSC Codes.

***References to the footnote in amendments to part a of the 2008 IS code***

 Having noted agreed that there should be no footnote in the certified true copy of amendments to mandatory instruments, MSC 98 agreed that the footnote to part A of the 2008 IS Code, adopted by resolutions MSC.413(97) and MSC.414(97) should be deleted.

MSC 98 approved the draft Amendments to part A of the IS code, and associated draft MSC resolutions ((resolution under the 1974 SOLAS convention and resolution under the 1988 LL protocol), with a view to adoption at MSC 99.

***Early implementation / application of IMO instruments***

 MSC 97 was invited to consider matters related to early implementation of amendments to mandatory instruments. The Plenary tasked a dedicated Working Group (WG) to develop draft Guidelines on the voluntary early implementation of amendments to the 1974 SOLAS Convention and related mandatory instruments, and the associated draft MSC circular.

Taking into account that MSC 97 reiterated the need to follow the four-year cycle of entry into force of amendments to SOLAS and related mandatory instruments (MSC.1/Circ.1481), the WG endorsed the view that voluntary early implementation should not be used on a regular basis but rather on very rare occasions. Any decision regarding an invitation on voluntary early implementation should be clearly recorded in the report of the Committee and, in case of a positive decision to do so, the Committee should issue an MSC circular inviting voluntary early implementation.

The WG also agreed that the following text should be introduced in the Procedures for Port State Control, 2011 (resolution A.1052(27)):

*"In relation to voluntary early implementation of amendments to the 1974 SOLAS Convention and/or related mandatory instruments, Parties should take into account the Guidelines on the voluntary early implementation of amendments to the 1974 SOLAS Convention and related mandatory instruments”*

MSC 98 approved MSC.1/Circ.1565 Guidelines on the voluntary early implementation of amendments to the 1974 SOLAS Convention and related mandatory instruments and endorsed the decision to amend the Procedures for Port State Control, 2011 (resolution A.1052(27)).

It has instructed III 4 to add the reference to these guidelines in the existing list of instruments set out in appendix 18 to the Procedures.

***Measures to enhance maritime security***

 MSC 96, having considered the urgent need to raise awareness on cyber risk threats and vulnerabilities, had approved MSC.1/Circ.1526 on Interim guidelines on maritime cyber risk management, with the understanding that the circular could be superseded in the future by a joint MSC/FAL circular once the work of FAL 41 on facilitation aspects was completed.

 MSC 98 has approved MSC-FAL.1/Circ.3 Guidelines on maritime cyber risk management.   
MSC 98 further adopted Resolution MSC.428(98) on maritime cyber risk management in Safety Management Systems.

This circular stress that cyber risks aboard vessels need to be accounted for in the same manner as other operational risks, namely through a Safety Management System (SMS) that meets the requirements of the ISM Code. Member States are encouraged 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 1 January 2021.

***Goal-based new ship construction standards***

MSC 98 was invited to consider the outcome of the final audit report for rectification of non-conformities and the proposal to reconsider the procedure for maintenance of verification of the GBS verification guidelines (resolution MSC.296(87)).

MSC 96 considered the final GBS verification audit reports delivered by the five audit teams established for this purpose, which included two common reports on IACS Common Packages (CP) 1 and 2, including IACS Common Structural Rules (CSR), and 12 individual reports of IACS member recognized organizations. MSC 96 confirmed that the information provided by the submitters demonstrated that their rules conform to the GBS Standards and agreed that six non-conformities (NC) identified were to be rectified.

The final audit report was delivered to the Secretary-General by the audit team on 6 February 2017.

MSC 98 has confirmed that the current maintenance of verification concept does not need to be modified as it is in line with the underlying principles of the GBS verification audits.

The revision of Part A – Verification process of the GBS Verification Guidelines was completed. Therefore, MSC 98 endorsed, in principle, draft part A, subject to editorial review. A text reflecting a three-year cycle for the maintenance of verification was drafted. Member States and international organizations may submit proposals to the Committee on this matter before the adoption of the draft Revised guidelines, tentatively scheduled at MSC 100.

With regard to the inclusion of procedures addressing "follow-up of observations", MSC 98 agreed to the inclusion in the draft Revised guidelines of a new subsection, mainly aimed at addressing those cases where the observations reported do not necessarily lead to rule changes.

The annual frequency of the maintenance of verification combined with a possible high volume of changes and a request for a new initial verification could constrain the available resources. Therefore, thetimetable and schedule of activities for the implementation of the GBS verification scheme has been amended. 

***Carriage of cargoes and containers***

Sub-committee CCC 3 authorized E&T 26 to finalize the draft amendments to the IMSBC Code, for submission to MSC 98 with a view to adoption.

CCC 3 further instructed E&T 26 to prepare related recommendations and circulars for submission to MSC 98 for approval (MSC.1/Circ.1395/Rev.2), together with the adoption of amendments to the IMSBC Code.

***Pollution prevention and response***

MSC 98 approved, subject to concurrent approval by MEPC 71:

* Draft amendments to the IBC Code on revised chapter 21, pending finalization of the revision of chapters 17 and 18 of the Code, for subsequent circulation of all three revised chapters and with a view to adoption;
* 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), for submission to A 30 (November 2017), with a view to adoption.

***Human element, training and watchkeeping***

MSC 98 has approved:

* MSC.1/Circ.1503/Rev.1 - ECDIS - Guidance for good practice;
* MSC.1/Circ.738/Rev.2 - Guidelines for Dynamic Positioning system (DP) operator training;
* STCW.6/Circ.13 - Amendments to part B of the Seafarers' Training, Certification and Watchkeeping (STCW) Code, relating to section B-V/f on guidance on Dynamic Positioning system (DP) operator training;
* STCW.7/Circ.24/Rev.1 - Guidance for Parties, Administrations, port State control authorities, recognized organizations and other relevant parties on the requirements under the STCW Convention, 1978, as amended, revoking MSC/Circ.1030 and MSC/Circ.1032;
* Draft Guidelines for port State control officers on certification of seafarers, hours of rest and manning, and referred the Guidelines to III 4 for inclusion in the ongoing work on the revision of resolution A.1052(27) on Procedures for port State control, 2011.

***Ship design and construction***

MSC 98 has adopted:

* Draft Revised Explanatory Notes to SOLAS chapter II-1 subdivision and damage stability regulations and the associated draft MSC resolution, in conjunction with the adoption of the draft amendments to SOLAS chapter II-1 subdivision and damage stability regulations.

MSC 98 has approved:

* Draft amendments to SOLAS regulations II-1/1 and II-1/8-1 on computerized stability support for the master in case of flooding for existing passenger ships, with a view to adoption at MSC 99;
* MSC.1/Circ.1570 - Amendments to section 3 of the Guidelines for damage control plans and information to the master (MSC.1/Circ.1245);
* MSC.1/Circ.1571 - Unified interpretations of SOLAS chapter II-1, in conjunction with the approval of the draft Revised Explanatory Notes to SOLAS chapter II-1 subdivision and damage stability regulations;
* MSC.1/Circ.1572 - Unified interpretations of SOLAS chapters II-1 and XII, of the Technical provisions for means of access for inspections (resolution MSC.158(78)) and of the Performance standards for water level detectors on bulk carriers and single hold cargo ships other than bulk carriers (resolution MSC.188(79));
* MSC.1/Circ.1464/Rev.1/ Corr.2 - Unified interpretations of SOLAS chapters II-1 and XII, of the Technical provisions for means of access for inspections (resolution MSC.158(78)) and of the Performance standards for water level detectors on bulk carriers and single hold cargo ships other than bulk carriers (resolution MSC.188(79));
* MSC/Circ.686/Rev.1 - Guidelines on the means of access to structures for inspection and maintenance of oil tankers and bulk carriers (SOLAS regulation XI-1/2);
* MSC.1/Circ.1573 - Unified interpretation of SOLAS regulations II-1/2.20 and II-2/3.21 (use of even-keel hydrostatics for determination of the regulatory deadweight to be entered on relevant statutory certificates);
* MSC.1/Circ.1574 on Interim guidelines for use of Fibre Reinforced Plastic (FRP) elements within ship structures: Fire safety issues. These guidelines should be used as a supplement to the Guidelines for the approval of alternatives and equivalents as provided for in various IMO instruments (MSC.1/Circ.1455) and the Guidelines on alternative design and arrangements for fire safety (MSC.1/Circ.1002, as amended by MSC.1/Circ.1552) when approving FRP elements within ship structures.

MSC 98 endorsed the view that four years would be a suitable period for Administrations to gather experience in the application of the Interim guidelines, with a view to reviewing them. In this context, a paragraph inviting Member States and international organizations to submit information, observations, comments and recommendations based on the practical experience gained through the application of the Interim guidelines to the SDC Sub-Committee under the agenda item "Any other business", was included in MSC.1/Circ.1574.

 The Polar Code entered into force for new ships on 1st of January 2017 and will be applicable to existing ships which intend to operate in Polar waters from 1 January 2018. The Polar Code does not apply to cargo ships between 300 gross tonnage and 500 gross tonnage, and fishing vessels and pleasure yachts have no basic international safety standards.

SDC 4 raised the question to decide when the development of the second phase of the Polar Code should begin. Some delegations suggested a possible approach for progression of the second phase of work, including a preliminary analysis of how this Code, as adopted by resolutions MSC.385(94) and MEPC.264(68), can be applied to non-SOLAS ships.

Taking into account the urgency of this issue, MSC 98 agreed to move this existing output from the post-biennial agenda of the Committee to its agenda for the 2018-2019 biennium and the provisional agenda of MSC 99, with a view to taking a policy decision regarding the scope of application of the second phase of the Polar Code, its mandatory or recommendatory status and types of vessels to be addressed. 

***Navigation, communications, search and rescue***

MSC 98 has adopted:

* Resolution MSC.430(98) – amendments to the revised performance standards for narrow-band direct-printing telegraph equipment for the reception of navigational and meteorological warnings and urgent information to ships (Navtex) (resolution MSC.148(77));
* Resolution MSC.431(98) – amendments to the revised performance standards for enhanced group call (egc) equipment (resolution MSC.306(87));
* Resolution MSC.432(98) – amendments to performance standards for multi-system shipborne radionavigation receivers (resolution MSC.401(95));
* Resolution MSC.434(98) – performance standards for a ship earth station for use in the GMDSS.

MSC 98 has approved:

* MSC.1/Circ.1575 - Guidelines for shipborne Position, Navigation and Timing (PNT) data processing;
* MSC.1/Circ.1576 - Unified interpretation of the provisions of SOLAS relating to the annual testing of the VDR, S-VDR, AIS and EPIRB;
* MSC.1/Circ.1577 - Unified interpretation on the application of COLREG with respect to the placement of sidelights;
* MSC.1/Circ.1460/Rev.2 - Guidance on the validity of radiocommunications equipment installed and used on ships.

MSC 98 also approved, with a view to adoption at MSC 99, draft amendments to SOLAS chapter IV and appendix (certificates) to accommodate additional mobile satellite systems and the draft consequential amendments to codes HSC 1994, HSC 2000 and SPS.

***Ship systems and equipment***

MSC 98 had for its consideration the draft functional requirements and the expected performance for SOLAS chapter III, with a view to proceeding with their development for achieving a more quantifiable version that could contribute to the future development of the GBS-SLA.

Noting the principles related to "Functional requirements (tier II)" embodied in the Generic Guidelines for developing IMO goal-based standards (MSC.1/Circ. 1394/Rev.1) and that, in order to make best use of the expected performance of specific functional requirements within Tier III verification of conformity, it is necessary to have measurable criteria available, MSC 98 has instructed SSE 4 to describe the necessary function of the draft functional requirements for SOLAS chapter III (expected performance) in quantitative terms.

Functional requirements ought to be formulated in a clear, unambiguous and objective manner and the expected performance should be expressed in as precise terms as possible, preferably quantitative.

MSC 98 also instructed SSE Sub-Committee to revise MSC.1/Circ.1394/Rev.1 at a future session, and to include guidance on how to develop the functional requirements of SOLAS chapter III once the Committee approves their quantified expected performance.

The close linkage between Formal Safety Assessment (FSA) and GBS-SLA is clearly visible by means of the references made in various places of the Interim Guidelines to the Revised guidelines for formal safety assessment (FSA) for use in the IMO rule-making process (MSC-MEPC/Circ.12/Rev.1).

It is suggested to use hazard identification as the starting point for developing IMO instruments in accordance with GBS. Hazard identification is a "risk-based method" which is typically used in an FSA for identifying main risk contributors for further consideration.

MSC 98 had for its consideration document MSC 98/6/5 (Germany), providing a proposal for a new section 14 of the draft Interim guidelines for development and application of IMO goal-based standards safety level approach.

MSC 98 agreed to keep both the existing and the proposed section 14 in brackets within the draft interim Guidelines, and invited delegations to submit concrete GBS-SLA examples as well as comments on both options for section 14, with a view to further developing the draft interim Guidelines at MSC 99 for approval at a future session.

MSC 98 has adopted Resolution MSC.435(98) – amendments to the Code for the construction and equipment of mobile offshore drilling units, 2009 (2009 MODU code).

MSC 98 has approved:

* MSC.1/Circ.1578 - Guidelines on safety during abandon ship drills using lifeboats (emanating from the adoption of the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear (resolution MSC.402(96));
* MSC.1/Circ.1579 - Amendments to the guidelines for developing operation and maintenance manuals for lifeboat systems (MSC.1/Circ.1205);
* MSC.1/Circ.1580 - Guidelines for vessels and units with Dynamic Positioning (DP) systems (will generally apply to vessels and units constructed on or after 16 June 2017; for existing vessels the Guidelines for vessels with dynamic positioning systems (MSC/Circ.645) would still be applicable);
* MSC.1/Circ.1581 - Unified interpretations of SOLAS chapter II-2 (restrictions on which spaces can be located within the cargo area);
* MSC.1/Circ.1582 - Unified interpretations of chapter 15 of the FSS Code (inert gas on tankers);
* MSC.1/Circ.1583 - Amendment to the unified interpretation of SOLAS regulation II-1/29 (MSC.1/Circ.1398);
* MSC.1/Circ.1584 - Amendments to the guidelines for evaluation and replacement of lifeboat release and retrieval systems (MSC.1/Circ.1392);
* Draft assembly resolution on escape route signs and equipment location markings (with a view to subsequent adoption by A 30).

MSC 98 has noted that SSE had endorsed the following draft corrigenda:

* Corrigendum to the Unified interpretation of SOLAS chapter II-2 on the number and arrangement of portable fire extinguishers on board ships (MSC.1/Circ.1275) which has been issued as document MSC.1/Circ.1275/Corr.1;
* Corrigendum to the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear (resolution MSC.402(96)) which has been issued as document MSC 96/25/Add.1/Corr.1.

***Formal safety assessment***

MSC 97 noted that it might be necessary to consider amending the flow chart shown in figure 2 referred to in paragraph 27 of appendix 10 to the FSA Guidelines, with a view to aligning it with paragraph 26 of appendix 10 to the FSA Guidelines and annex 6 to the document on Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies (MSC-MEPC.1/Circ.5).

The Plenary agreed to the proposed amendment to flow chart. MSC 98 approved the draft MSC-MEPC circular on Revised guidelines for Formal Safety Assessment (FSA) for use in the IMO rule-making process (MSC-MEPC.2/Circ.12/Rev.2), subject to concurrent approval by MEPC 72. The provisions of the Revised FSA guidelines would be applicable with immediate effect.

***Implementation of instruments and related matters***

MEPC 70 seeking clarification on issues that had arisen since the implementation of the new format for the Certificate of Fitness (CoF) under the IBC, BCH, GC, IGC and EGC Codes, instructed the Secretariat to prepare, and for concurrent action, as appropriate, by MEPC 71:

* a draft joint MSC-MEPC circular addressing how CoFs are to be completed for ships that do not yet have to comply with the amendment requiring the provision of an approved stability instrument, along with the matter of the resolutions that have to be stated on page one of the CoF, for approval by MSC 98;
* draft amendments to the IBC, BCH, GC, IGC and EGC Codes for consideration by MSC 98 with a view to approval.

Plenary did not rise any objection. Consequently, MSC 98 has approved the draft MSC-MEPC.5 circular on Guidance on completing the Certificate of Fitness under the IBC, BCH, IGC, GC and EGC Codes, and also the draft amendments to the Certificates of Fitness under the IBC, BCH, IGC, GC and EGC Codes.

MSC referred the above draft Guidance and the amendments to the IBC and BCH Codes to MEPC 71, for consideration with a view to concurrent approval, and with finally adoption at MSC 99.

***Work programme***

MSC 98 agreed to include in the post-biennial agenda of MSC the following outputs:

* Regulatory scoping exercise for the use of Maritime Autonomous Surface Ships (MASS);
* Amendments to the CSS Code with regard to weather-dependent lashing;
* Revision of SOLAS chapters III and IV for Modernization of the GMDSS, including related and consequential amendments to other existing instruments;
* Development of guidelines for cold ironing of ships and of amendments to SOLAS chapters II -1 and II-2, if necessary;
* Development of guidelines for cold ironing of ships and of amendments to SOLAS chapters II- 1 and II-2, if necessary;
* Amendments to chapter 9 of the FSS Code for fault isolation requirements for cargo ships and passenger ship cabin balconies fitted with individually identifiable fire detector systems;
* Amendments to Guidelines for the approval of fixed dry chemical powder fire-extinguishing systems for the protection of ships carrying liquefied gases in bulk (MSC.1/Circ.1315);
* Revision of SOLAS chapter III and the LSA Code to remove gaps, inconsistencies and ambiguities based on the safety objectives, functional requirements and expected performance for SOLAS chapter III.

***Any other business***

A long discussion was held on the safety concerns with regard to achieving consistent, safe and effective implementation of the global 0.50% sulphur limit for fuel oil used on ships.

MEPC 70 requested PPR 4 to prepare a draft justification and scope for a new output on what additional measures may be developed to promote consistent implementation of the 0.50% global sulphur limit, for consideration at MEPC 71.

Emphasizing that the requirement in SOLAS chapter II-2 for the flashpoint of oil fuel remains at 60ºC for ships that do not comply with the IGF Code, MSC 98 has encouraged interested Member States and international organizations to submit proposals to the CCC Sub-Committee with a view to developing specific requirements for low-flashpoint oil fuel, within the context of the IGF Code only.

MSC 98 also invited MEPC 71, when considering the draft justification for the proposed output on "Consistent implementation of regulation 14.1.3 of MARPOL Annex VI" developed by PPR 4, to explicitly add, in the scope of the proposed output, considerations on the safety implications relating to the option of blending fuels in order to meet the 0.50% m/m sulphur limit.

It instructed PPR to report to MSC regarding any safety issues that may be identified with regard to low-sulphur oil fuel, subject to the aforementioned proposed output.