MSC 101 – 5 to 14 June 2019

MAJOR OUTCOMES OF THE 101ST SESSION OF THE MARITIME SAFETY COMMITTEE

SUMMARY

The 101st session of the Maritime Safety Committee was held at IMO Headquarters from 5 to 14 June 2019

MSC 101 adopted following resolutions:

- Resolution MSC.456(101) – Amendments to the international convention for the safety of life at sea (SOLAS), 1974 (item 3);
- Resolution MSC.457(101) – Amendments to the international code for fire safety systems (FSS Code) (item 3);
- Resolution MSC.458(101) – Amendments to the international code of safety for ships using gases or other low-flashpoint fuels (IGF Code) (item 3);
- Resolution MSC.459(101) – Amendments to the international life-saving appliance code (LSA Code) (item 3);
- Resolution MSC.460(101) – Amendments to the international code for the construction and equipment of ships carrying dangerous chemicals in bulk (IBC Code) (item 3);
- Resolution MSC.461(101) – Amendments to the international code on the enhanced programme of inspections during surveys of bulk carriers and oil tankers, 2011 (2011 ESP Code) (item 3);
- Resolution MSC.462(101) – Amendments to the international maritime solid bulk cargoes code (IMSBC Code) (item 3);
- Resolution MSC.463(101) – Amendments to the code for the construction and equipment of ships carrying dangerous chemicals in bulk (BCH Code) (item 3);
- Resolution MSC.464(101) – Amendments to the code of safety for special purpose ships (SPS Code) (item 3);
- Resolution MSC.465(101) – Recommended interim measures to enhance the safety of ships relating to the use of oil fuel. (item 8);
- Resolution MSC.467(101) – Guidance on the definition and harmonization of the format and structure of maritime services in the context of E-navigation (item 11);
- Resolution MSC.472(101) – Amendments to the revised recommendation on testing of life-saving appliances (Res MSC.81(70)) (item 14).
MSC 101 approved following circulars:

- MSC-MEPC.2/Circ.17 on 2019 Guidelines for the carriage of blends of biofuels and MARPOL Annex I cargoes (item 3);
- PPR.1/Circ.7 on Decisions with regard to the categorization and classification of products (item 3);
- MSC.1/Circ.1604 - Interim guidelines for MASS trials (item 5);
- MSC.1/Circ.1394/Rev.2 Generic guidelines for developing IMO goal-based standards (item 6);
- draft Assembly resolution on Interim safety measures for non-SOLAS ships operating in Polar waters (item 7);
- MSC.1/Circ.1610 -Initial descriptions of Maritime Services in the context of e-navigation (item 11);
- MSC.1/Circ.1612 - Guidance for navigation and communication equipment intended for use on ships operating in polar waters (item 11);
- MSC.1/Circ.1222/Rev.1 - Guidelines on annual testing of voyage data recorders (VDR) and simplified voyage data recorders (S-VDR) (item 11);
- MSC-MEPC.5/Circ.15 - Delivery of compliant fuel oil by suppliers (item 13);
- MSC.1/Circ.1212/Rev.1- Revised guidelines on alternative design and arrangements for SOLAS chapters II-1 and III (item 14);
- MSC.1/Circ.1614 – Interim guidelines on life-saving appliances and arrangements for ships operating in polar waters (item 14);
- MSC.1/Circ.1615 - Interim guidelines for minimizing the incidence and consequences of fires in ro-ro spaces and special category spaces of new and existing ro-ro passenger ships (item 14);
- MSC.1/Circ.1205/Rev.1. Guidelines for developing operation and maintenance manuals for lifeboat systems (item 14).

MSC 101 approved the following Unified interpretations:

- MSC.1/Circ.1605 on Unified Interpretations of the IGF Code (item 9);
- MSC.1/Circ.1606 on Unified Interpretations of the IGC Code (item 9);
- MSC.1/Circ.1607 - Carriage of chapter 19 products, amended IGC Code (resolution MSC.370(93)) (item 9);
- MSC.1/Circ.1537/Rev.1 - Unified interpretations of the 2008 IS Code (item 12);
- MSC.1/Circ.1535/Rev.1 - Unified interpretations relating to the Protocol of 1988 relating to the International Convention on Load Lines, 1966 (item 12);
- MSC.1/Circ.1539/Rev.1.- Unified interpretation on SOLAS chapter II-1 (item 12);
- MSC.1/Circ.1616 - Unified interpretations of SOLAS chapter II-2, concerning regulations II-2/9.2 (Containment of fire, thermal and structural boundaries), II-2/9.7.5 (Containment of fire, ventilation systems, exhaust ducts from galley ranges) and II-2/10.10.4 (Fire-fighting, fire-fighter’s outfits, fire-fighter’s communication) (item 14);
- MSC.1/Circ.1617 on Unified interpretations of the IGC Code, concerning paragraphs 11.3.6 (Fire protection and extinction, water-spray system), and 11.4.8 (Fire protection and extinction, dry chemical powder fire-extinguishing systems) (item 14);
- MSC.1/Circ.1618 - Unified interpretations of SOLAS chapter III, concerning regulations III/20.11 (Operational readiness, maintenance and inspections, maintenance, thorough examination, operational testing, overhaul and repair of lifeboats, rescue boats and fast rescue boats, launching appliances and release gear), III/22.1.1 and III/32.1.1 (Personal life saving appliances, lifebuoys) (item 14);
- MSC.1/Circ.1416/Rev.1 - Unified interpretations of SOLAS regulations II-1/28, II-1/29 and II-1/30 (item 14).
MSC 101 also approved:

- draft amendments to SOLAS chapter II-1 (item 12);
- draft amendments to paragraph 6.7.1.1 and chapter 11 of the IGF Code (item 9);
- draft amendments to paragraph 6.5.3.5.1 of the IGC Code, and draft amendments to paragraph 16.3.3.5.1 of the IGF Code (item 9);
- draft amendments to SOLAS regulation II-1/3-8 (Towing and mooring equipment) (item 12);
- draft Guidelines on the design of mooring arrangements and the selection of appropriate mooring equipment and fittings for safe mooring, and the associated draft MSC circular (item 12);
- draft Guidelines on the design of mooring arrangements and the selection of appropriate mooring equipment and fittings for safe mooring, and the associated draft MSC circular (item 12);
- draft amendments to the Guidance on shipboard towing and mooring equipment (MSC.1/Circ.1175) (item 12);
- draft Assembly resolution on Amendments to the Use and fitting of retro-reflective materials on life-saving appliances (resolution A.658(16)) (item 14);

It is to be noted that MSC 101 invited Member Governments and international organizations to submit proposals for a new output to MSC 102 on loss of containers at sea.
**Item 2- Decisions of other IMO bodies**

*Action requested by MEPC 74*

MEPC 73 adopted, by resolution MEPC.310(73), the Action Plan to address marine plastic litter from ships. It had considered the establishment of a mandatory system for reporting containers lost at sea, and the corresponding action in the Action Plan, subject to supporting proposals being submitted to MSC 101.

The Committee expressed general support to tackle the problem of containers lost at sea, and invited Member Governments and international organizations to submit proposals for a relevant new output to MSC 102.

**Item 3 - Consideration and adoption of amendments to mandatory instruments**

*Proposed amendments to the 1974 SOLAS Convention*

MSC 101 adopted Resolution MSC.456(101) – Amendments to the international convention for the safety of life at sea (SOLAS), 1974.

MSC 100 had approved draft amendments to the appendix (Certificates) to the annex to the 1974 SOLAS Convention, concerning the addition of a footnote to Forms C, E and P in the Records of Equipment.

Amendments to the appendix (Certificates) to the annex to the 1974 SOLAS Convention and the draft associated MSC resolution

- Record of equipment for cargo ship safety (form E)
  - 3 Details of navigational systems and equipment
- Record of equipment for cargo ship safety (form C)
  - 5 Details of navigational systems and equipment
- Record of equipment for passenger ship safety (form P)
  - 5 Details of navigational systems and equipment

These amendments to the appendix to the 1974 SOLAS Convention should be deemed to have been accepted on 1 July 2023 and enter into force on 1 January 2024.

After adoption of the above amendments, the observer from IACS advised the Committee that, in line with the Guidance on the timing of replacement of existing certificates by the certificates issued after the entry into force of amendments to certificates in IMO instruments (MSC-MEPC.5/Circ.6, paragraph 3.1), unless IACS Members are provided with written instructions to the contrary by the Administration on whose behalf they are authorized to act as a recognized organization, they will issue the revised Records of Equipment at the time the existing certificate associated with the revised Record of Equipment is renewed after the entry into force of the amendments.

**FSS Code**

MSC 101 adopted Resolution MSC.457(101) – Amendments to the international code for fire safety systems (FSS Code).
MSC 100 had approved draft amendments to chapter 15 (Inert gas systems) of the FSS Code, concerning inert gas lines and related indicators and alarms for monitoring the pressure of the inert gas mains.

These amendments should be deemed to have been accepted on 1 July 2023 and enter into force on 1 January 2024.

CHAPTER 15 inert gas systems

2 Engineering specifications

2.2 Requirements for all systems

2.2.3.2 Inert gas lines

Paragraph 2.2.3.2.1 is replaced as follows:

"2.2.3.2.1 The inert gas main may be divided into two or more branches forward downstream of the non-return devices required by paragraph 2.2.3.1."

Paragraph 2.2.3.2.6 is replaced as follows:

"2.2.3.2.6 Arrangements shall be provided to enable the inert gas main to be connected to an external supply of inert gas. The arrangements shall consist of a 250 mm nominal pipe size bolted flange, isolated from the inert gas main by a valve and located forward downstream of the non-return valve. The design of the flange should conform to the appropriate class in the standards adopted for the design of other external connections in the ship's cargo piping system."

2.2.4 Indicators and alarms

Paragraph 2.2.4.2 is replaced as follows:

"2.2.4.2 Instrumentation shall be fitted for continuously indicating and permanently recording, when inert gas is being supplied:

1. the pressure of the inert gas mains forward downstream of the non-return devices; and
2. the oxygen content of the inert gas."

IGF code

The Plenary adopted Resolution MSC.458(101) – amendments to the international code of safety for ships using gases or other low-flashpoint fuels (IGF Code).

MSC 100 had approved draft amendments to parts A and A-1 of the IGF Code, concerning natural gas-specific requirements.

Some delegates considered that in order to ensure that the critical safety requirement for positive timely detection of leakages is enforced with no ambiguity, leakage detection for secondary enclosures around all liquefied fuel pipes should be explicitly required. In this regard, the Plenary agreed to the following proposal for paragraph 9.5.6 with similar wording to that used in paragraph 6.4.5.3 of the IGF Code on leakage :

"9.5.6 Liquefied fuel pipes shall be protected by a secondary enclosure able to contain leakages. If the piping system is in a fuel preparation room or a tank
connection space, the Administration may waive this requirement. Where gas detection as required in 15.8.1.2 is not fit for purpose, the secondary enclosures around liquefied fuel pipes shall be provided with leakage detection by means of pressure or temperature monitoring systems, or any combination thereof.

These amendments should be deemed to have been accepted on 1 July 2023 and enter into force on 1 January 2024.

**LSA Code**

MSC 101 adopted Resolution MSC.459(101) – amendments to the international life-saving appliance code (LSA Code).

MSC 100 had approved draft amendments to chapters IV and VI of the LSA Code, concerning general requirements for lifeboats and launching and embarkation appliances.

The Committee agreed that the amendments should apply to newly installed rescue boats; and the implementation provision should be included in the adopting draft resolution.

These amendments should be deemed to have been accepted on 1 July 2023 and enter into force on 1 January 2024.

**IBC Code**

MSC 101 adopted Resolution MSC.460(101) – amendments to the international code for the construction and equipment of ships carrying dangerous chemicals in bulk (IBC Code).

MSC 100 had approved, concurrently with MEPC 73, draft amendments to chapters 15, 16, 17, 18, 19 and 21 of the IBC Code.

MSC 101 agreed to modifications to the draft amendments to the IBC Code approved by MEPC 73 and MSC 100, which included the deletion of entries from chapters 17 and 19 that had been included in annex 12 to Provisional categorization of liquid substances in accordance with MARPOL Annex II and the IBC Code (MEPC.2/Circ.24); the addition of a reference to the RO Code (in order to align it with the associated references in MARPOL Annex II and SOLAS regulation XI-1/1) and to the deletion of the corresponding biofuel blend entries.

Those amendments should be deemed to have been accepted on 1 July 2020 and enter into force on 1 January 2021 (MSC.1/Circ.1481 was not applicable to the IBC Code amendments).

**ESP Code**


MSC 99 approved a draft MSC resolution on amendments to the 2011 ESP Code, prepared by SDC 5 in accordance with the procedure for undertaking regular updates of the Code, with a view to adoption at MSC 100.

In addition to the development of the aforementioned amendments to the 2011 ESP Code, SDC 4 agreed to prepare a consolidated text of the Code, which would include the above amendments to the existing Code, so that the new consolidated Code would be in line with the latest version of
IACS Unified Requirement (UR) Z10. It was anticipated that the new 2019 ESP Code would supersede the 2011 ESP Code, as amended, upon its expected entry into force on 1 January 2022. At SDC 5, after finalizing the amendments to the 2011 ESP Code, the SDC Sub-Committee requested the Secretariat and IACS to prepare a draft consolidated text of the Code for consideration at SDC 6.

MSC 100 decided to hold their adoption in abeyance and invited IACS to work together with the Secretariat intersessionally to prepare a revised set of draft amendments to the Code using "shall/should" instead of "is to/are to", as appropriate, for submission to MSC 101 with a view to adoption.

Taking into account the decision of MSC 100 to include the draft amendments to the 2011 Code in the new 2019 ESP Code, the differences between the draft 2011 ESP Code, as amended, and the new draft 2019 ESP Code are now minor.

But the Plenary considered the burden to IACS and the Secretariat in reflecting the draft amendments to the 2011 Code and, at the same time, incorporating the same amendments in the draft 2019 ESP Code and, therefore, suggesting to discontinue the simultaneous work on both instruments and instead to adopt only the amendments to the 2011 ESP Code, in lieu of also approving the identical consolidated text of the 2019 ESP Code.

The draft amendments to the 2011 ESP Code proposed for adoption at the current session should be deemed to have been accepted on 1 July 2020 and enter into force on 1 January 2021.

**IMSBC Code**

Following proposal agreed by CCC5 (amendments 05-19), MSC 101 adopted Resolution MSC.462(101) – amendments to the international maritime solid bulk cargoes code (IMSBC Code).

In response to a suggestion from Japan, MSC 101 agreed to modify the paragraph as follows:

"3.6.3 Gas concentration safety checks shall also be continued throughout the voyage at least at eight-hour intervals or more frequently if so advised by the fumigator-in-charge at all appropriate locations, which shall at least include: accommodation; engine-rooms; areas designated for use in navigation of the ship; and frequently visited working areas and stores, such as the forecastle head spaces, adjacent to cargo holds being subject to fumigation in transit."

The amendments to the IMSBC Code, proposed for adoption at the current session, should be deemed to have been accepted on 1 July 2020 and enter into force on 1 January 2021, and that SOLAS Contracting Governments could apply the amendments in whole, or in part, on a voluntary basis from 1 January 2020.

**BCH Code**

MSC 101 adopted Resolution MSC.463(101) – amendments to the code for the construction and equipment of ships carrying dangerous chemicals in bulk (BCH Code).

MSC 100 had approved draft consequential amendments to chapters IV, V and VI of the BCH Code, in conjunction with the adoption of the corresponding amendments to the IBC Code.

The amendments to the BCH Code should take effect on 1 January 2021, in line with the dates agreed by MEPC 74 for the corresponding amendments to IBC code.
**SPS Code**

MSC 101 adopted Resolution MSC.464(101) – amendments to the code of safety for special purpose ships (SPS Code).

Following the adoption of amendments to chapter IV of, and the appendix (Certificates) to, the 1974 SOLAS Convention (resolution MSC.436(99)), MSC 100 had adopted consequential amendments to the Record of Equipment of the Code of Safety for Special Purpose Ships (SPS Code) (resolution MSC.453(100)). In adopting resolution MSC.453(100), having noted that further amendments to the SPS Code were necessary to update the Record of Equipment for the SPS Safety Certificate.

Hence, the draft amendments to the SPS Code should take effect on 1 January 2020, in conjunction with the entry into force of the related amendments to SOLAS chapter IV and the appendix (Certificates), adopted by resolution MSC.436(99).

The observer from IACS advised the Committee that, in line with the Guidance on the timing of replacement of existing certificates by the certificates issued after the entry into force of amendments to certificates in IMO instruments (MSC-MEPC.5/Circ.6, paragraph 3.1), unless IACS Members are provided with written instructions to the contrary by the Administration on whose behalf they are authorized to act as a recognized organization, they will issue the revised Safety Certificates and Records of Equipment at the time the existing certificate is renewed after the entry into force of the amendments.

**2019 Guidelines for the carriage of blends of biofuels and MARPOL Annex I cargoes**

PPR 6 had agreed to consequential amendments to the 2011 Guidelines for the carriage of blends of petroleum oil and biofuels, as amended (MEPC.1/Circ.761/Rev.1), as a result of the inclusion of a new annex 12 (Energy-rich fuels subject to Annex I of MARPOL) in the MEPC.2/Circular on Provisional categorization of liquid substances, and had included a reference to SOLAS regulation VI/5.2 regarding a prohibition of the blending of bulk liquid cargoes and production processes during sea voyages.

PPR 6 had prepared a draft MSC-MEPC circular on 2019 Guidelines for the carriage of blends of biofuels and MARPOL Annex I cargoes, subject to concurrent approval by MEPC 74 and MSC 101.

Having noted that MEPC 74 had approved the draft Guidelines, The Committee concurrently approved MSC-MEPC.2/Circ.17 on 2019 Guidelines for the carriage of blends of biofuels and MARPOL Annex I cargoes.

**Decisions with regard to the categorization and classification of products**

Following finalization of draft revised chapters 17, 18, 19 and 21 of the IBC Code approved by MEPC 73, PPR 6 had prepared amendments to the Decisions with regard to the categorization and classification of products (BLG.1/Circ.33), to capture all relevant decisions to date in relation to the assignment of carriage requirements under the IBC Code.

PPR 6 had invited MEPC 74 and MSC 101 to endorse the draft PPR.1 circular on Decisions with regard to the categorization and classification of products.

Having noted that MEPC 74 had endorsed the updated Decisions, MSC 101 concurrently endorsed
Item 5 - Regulatory scoping exercise for the use of maritime autonomous surface ships (MASS)

Progress of the regulatory scoping exercise

MSC 100 had approved the Framework for the regulatory scoping exercise for the use of MASS, including the plan of work and procedures.

Secretariat initiated the development of a new GISIS module for the regulatory scoping exercise on MASS. It has been designed to accommodate the work of different committees of the Organization on the matter.

The commenting stage related to the initial review will be activated in May 2019 to allow IMO Members to comment on the initial review conducted by volunteering Member States. The commenting stage is completed on 30 June 2019.

For each provision and degree of autonomy, IMO Members will have the opportunity to indicate whether they agree or disagree with the initial review and, in case of disagreement, will be required to indicate the MASS application and to provide a brief justification to facilitate subsequent analysis.

After completion of the commenting stage, volunteering Member States having conducted the initial review will be able to consider the comments and, if necessary, amend or modify their initial review. This stage should be completed by the end of July 2019 to enable the presentation of the results in time for the four-week deadline for submissions to the Intersessional Working Group on MASS, which has been scheduled to take place from 2 to 6 September 2019.

MSC 101 agreed that only information relevant to enable the intersessional Working Group to consider the results of the first step and information relevant for the analysis in the second step should be captured, to facilitate the work to be undertaken.

LEG 106 and FAL 43 had also approved their own frameworks for the regulatory scoping exercise (RSE) of instruments under their purview, based on the framework agreed by MSC.

MSC 101 had for its consideration a proposal from Finland and France of a list of terms, the understanding of which differed significantly between different stakeholders; the use of alternative terms; and the development of a draft glossary to facilitate the future work on MASS.

The Committee agreed that the matter of a glossary should be further considered after RSE had been completed; together with the submission from ISO concerning their aforementioned new standard expected for MSC 102.

Intersessional Working Group on MASS and development of draft terms of reference

The intersessional Working Group on MASS would be held from 2 to 6 September 2019, as set out in Circular Letter No.3945, in order to review the results of the first step of the scoping exercise and authorize, on behalf of the Committee, the commencement of the second step of the RSE.

The ISWG will have in particular to provide guidance to Member States for use in the second step; and consider how the outcome of the second step should be reported to MSC 102.

Interim guidelines for MASS trials
These Guidelines have been developed to assist relevant authorities and relevant stakeholders with ensuring that the trials of MASS related systems and infrastructure are conducted safely, securely, and with due regard for protection of the environment.

They provide guidance to:

- coastal State;
- flag State;
- port State;
- relevant stakeholders such as shipowners/authorized representatives, operators and other involved parties in the conduct of MASS trials.

MSC 101 agreed to include a “Risk management” section in the guidelines as one of the principles and main objectives. Noting that emergency plans and measures for MASS trials would be one of the key factors of risk management, it was agreed to include them as a part of risk management.

Taking into account the principles agreed by MSC 100, and that compliance with mandatory instruments should be addressed, a section on this issue has been included into the guidelines.

MSC also agreed that, taking into account the nature of the guidelines, they should not address non-mandatory instruments, but only mandatory instruments.

It was agreed to include a separate section stating that appropriate means of communication and data exchange, as well as redundancy, should be provided.

A section for reporting requirements and information sharing was inserted regarding details of trials to be reported to relevant authorities to enable dissemination to relevant third parties, underlining also that the reporting requirements of IMO instruments should be complied with.

**Item 6 - Goal-based new ship construction standards**

**Current status of GBS verification audits**

MSC 96 confirmed that the information provided by the 12 IACS member ROs demonstrated that their rules conform to the Standards and the process of the initial GBS verification audit was successfully completed when MSC 98 concluded that all identified non-conformities had been rectified by the 12 IACS member ROs.

MSC 100, having considered the initial verification audit report of Türk Loydu, confirmed that the information provided by Türk Loydu had demonstrated that its rules conformed to the Standards. Subsequently, the Committee requested that identified non-conformities be addressed by Türk Loydu and that a request for a rectification of non-conformity audit should be submitted to the Secretary-General accordingly. The formal request to conduct a rectification on non-conformities audit was submitted by Türk Loydu and the audit team was established accordingly.

Following the above-mentioned requirement for communication of rule changes, the 12 IACS member ROs submitted their first set of rule changes in 2018 and an audit team was established to conduct a maintenance of verification audit, which was considered by MSC 100. It confirmed that the information provided by the submitters (all IACS member ROs, except for DNV-GL) had demonstrated continued conformance with the Standards and agreed that the identified non-conformities should be rectified.
The annual rule changes for 2019 were due on 31 March 2019, and documentation has been received by the Secretariat to that effect from IACS member ROs with all communicated rule changes being subject to an annual maintenance of verification audit. The Secretariat will establish an audit team after assessing the received documentation packages in order to identify the extent of the maintenance audit for each IACS member RO, bearing in mind that only 10% of the rule changes should be audited.

**Three-step process**

MSC 101 noted that, after establishing the goal, a three-step development process needs to be initiated in the following order:

1. identification, ranking and selection of relevant hazards;
2. developing risk mitigating functions and expected performance;
3. formulation of functional requirements including description, rationale and expected performance.

**Proposed amendments to the Generic guidelines (MSC.1/Circ.1394/Rev.1)**

MSSC 101 approved MSC.1/Circ.1394/Rev.2 Generic guidelines for developing IMO goal-based standards.

MSC 100 had considered the experience gained by SSE 5 in applying the Generic guidelines for developing IMO goal-based standards (MSC.1/Circ.1394/Rev.1) for the development of draft goals and functional requirements for onboard lifting appliances and anchor handling winches and, subsequently, had agreed to amend them to aid their application throughout the IMO’s regulatory activity.

**Qualitative performance**

MSC 101 had for its consideration a proposal to amend the Generic Guidelines by deleting the word "rationale" as an element of formulating Tier II functional requirements and to expand the requirements for "expected performance", which is currently limited to "quantitative performance"; and to delete appendix 2, which is inconsistent with the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III (MSC.1/Circ.1212).

An extensive discussion occurred on whether or not to address the option of formulating expected performance in qualitative terms. In this connection, MSC he Group recalled the decision of MSC 98 that expected performance should preferably be formulated in quantitative terms, which would allow for exceptions.

MSC 101 agreed that there was a need to update the Generic Guidelines so as to reflect experience gained in their application and thus amended paragraph 13.3 to reflect the decision of MSC 98, so as to permit the development of functional requirements based on qualitative expected performance in those cases where it would be impracticable otherwise.

**Appendix 2**

MSC 101 noted the view that the draft amendments to the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III (MSC.1/Circ.1212) were developed contradicting the examples in appendix 2. Thus, it agreed to minor changes to appendix 2 to ensure consistency with the new draft appendix 3 and the main body of the Generic Guidelines.

**Appendix 3**
An example was included in the annex to the Generic Guidelines explaining the process of developing functional requirements for goal-based regulations.

**Item 7 - Safety measures for non-SOLAS ships operating in Polar waters**

MSC 100, having noted the diverse views on widening the mandatory application of the Polar Code, had invited Member States and international organizations to submit to MSC 101 information that would assist in determining the feasibility and consequences of applying the requirements in chapters 9 and 11 of the Polar Code to non-SOLAS ships. MSC 100 had endorsed the view that, as an interim measure, a resolution to urge Member States to implement recommendatory measures for non-SOLAS ships operating in polar waters could be developed.

**Feasibility and consequences of applying the requirements in chapters 9 and 11 of the Polar Code to non-SOLAS ships**

Following the discussion, the Plenary instructed NCSR 7 to consider consequences and feasibility of applying chapters 9 and 11 of the Polar Code to non-SOLAS ships, and how best to enhance the safety of non-SOLAS ships, including possible development of amendments to SOLAS and/or the Polar Code.

SOLAS chapter XIV was adopted in November 2014 to give effect to part I of the Polar Code covering safety measures (part II covers environmental measures under MARPOL). This chapter makes the Polar Code's additional safety measures mandatory for SOLAS ships.

Non-SOLAS ships, especially fishing vessels and yachts, which are not currently covered by specific safety standards for operation in polar waters, are the most prevalent ships operating in Antarctic waters, and the most vulnerable to life-threatening incidents.

**Draft Assembly resolution on implementation of safety measures of the Polar Code on ships not certified under SOLAS**

MSC 101 approved a draft Assembly resolution on Interim safety measures for non-SOLAS ships operating in Polar waters, for submission to A 31 with a view to adoption.

It urges Member States, on a voluntary basis, to implement the safety measures of the Polar Code, as far as possiblepracticable, for ships not certified under the SOLAS Convention operating in polar waters, especially including for fishing vessels of 24 metres in length and over and pleasure yachts of 300 gross tonnage and above not engaged in trade.

Res MSC.385(94), by which the Polar Code was adopted, already invited SOLAS Contracting Governments to consider the voluntary application of the Code to non-SOLAS ships, but there was merit to emphasize this again in an Assembly resolution.

The resolution is expected to motivate Administrations to take practical steps compatible with their existing domestic regulatory frameworks, to ensure that seafarers on non-SOLAS ships under their jurisdiction are afforded as high a level of protection as seafarers on SOLAS ships.

**Item 8 – Development of further measures to enhance the safety of ships relating to the use of fuel oil**

**Measures to enhance the safety of ships relating to the use of fuel oil**
MSC 100 had included in the biennial agenda of the Committee an output on "Development of
further measures to enhance the safety of ships relating to the use of fuel oil". MSC 100 had
acknowledged that urgent actions were required to address the safety implications associated
with the use of low-sulphur fuel oil, but that long-term solutions to enhance the safety of ships
relating to the use of fuel oil were also needed.

MSC 101 had for its consideration a proposal from IACS of a method of work and items to be
taken into account when developing measures to enhance the safety of ships relating to the use
of fuel oil, in particular that a stepped approach was proposed in order to justify the need to take
regulatory action.

MSC 101 adopted Resolution MSC.465(101) – Recommended interim measures to enhance the
safety of ships relating to the use of oil fuel.

According to this new resolution, Contracting Governments are invited to:

- inform IMO, for transmission to Parties and Member States of the Organization, of all
  confirmed cases where oil fuel suppliers delivered oil fuel failing to meet the
  requirements specified in SOLAS regulation II-2/4.2.1,
- take action as appropriate against oil fuel suppliers in confirmed cases of deliveries of oil
  fuel that does not comply with the requirements specified in SOLAS regulation II-2/4.2.1;
- encourage the widest possible application of the latest edition of relevant industry
  standards and guidance to enhance the safety of ships related to supply and use of oil
  fuel;
- inform IMO, for transmission to Parties and Member States of the Organization, of
  confirmed cases where oil fuel suppliers had delivered fuel that jeopardized the safety of
  ships or personnel; or adversely affected the performance of the machinery.

MSC 101 adopted simultaneously an action plan for measures to enhance the safety of ships
relating to the use of oil fuel, with the following milestones:

- MSC 102 (2020) - Further consideration on measures related to flashpoint:
- MSC 103 (2020) - Finalization of measures related to flashpoint;
- MSC 104 (2021) - Finalization of measures to enhance the safety of ships relating to the
  use of oil fuel.

**Documentation and reporting non-compliance of flashpoint requirements**

The Plenary agreed that, currently, there was no mandatory provision with regard to the
documentation of the flashpoint, taking into account that the existing requirement on bunker
delivery notes (BDN) in MARPOL Annex VI does not address the flashpoint. The Group also noted
a view that commercial contracts for each fuel delivery are typically based on ISO 8217, which
includes a limit for flashpoint in line with SOLAS regulation II-2/4.2.1.

MSC 101 agreed that the development of mandatory requirements with regard to the
documentation of flashpoint should be further discussed and should be included in the action
plan. Urgent action regarding reporting of non-compliance of flashpoint should be taken, i.e. to
recommend that SOLAS Contracting Governments inform the Organization, for transmission to
Parties and Member States of the Organization, of all confirmed cases where oil fuel suppliers
delivered fuel failing to meet the requirements specified in SOLAS regulation II-2/4.2.1, taking into
account regulation 18.9.6 of MARPOL Annex VI

**Actions against oil fuel suppliers that have been found to deliver oil fuel that does not comply
with minimum flashpoint requirements**
It was agreed that an urgent recommendation to the SOLAS contracting Governments to take action, as appropriate, against fuel oil suppliers in confirmed cases of deliveries of oil fuel that do not comply with the requirements specified in SOLAS regulation II-2/4.2.1 was needed, taking into account regulation 18.9.4 of MARPOL Annex VI. This matter should be and included in the action plan.

**Guidelines for ships to address situations where independent test results indicate that non-compliant oil fuel was delivered**

MSC 101 agreed to include an item in this regard in the action plan

**Fuel properties other than flashpoint**

MSC considered, utilizing the structured approach proposed by IACS, other oil fuel properties, i.e. stability, compatibility, cold flow, acid number, ignition and combustion quality, cat fines, low viscosity, pour point and unusual components and their potential safety implications.

Having noted that, currently, there were no specific safety provisions on these matters, MSC 101 agreed that an urgent recommendation to the SOLAS contracting Governments regarding the application of the latest version of industry standards and guidance and the reporting of confirmed cases where oil fuel suppliers had delivered fuel that jeopardized the safety of ships or personnel or could have adversely affected the performance of the machinery was needed.

It agreed that further information and consideration on these fuel properties were needed and agreed to include the corresponding items in the action plan.

**GISIS module for reporting non-compliance of flashpoint requirements**

MSC 101 agreed that a GISIS platform for reporting of non-compliance of flashpoint requirements should be developed, with a preference to integrate it in the existing GISIS platform for MARPOL Annex VI.

**Unified interpretation on service tank arrangements**

Owing to the impossibility to reach consensus regarding the draft unified interpretation on service tank arrangements, MSC 101 has instructed SDC 7 to further consider the development of a unified interpretation of SOLAS regulation II-1/26.11

**Item 9 – Carriage of cargoes and containers**

**Draft amendments to the IGF Code**

MSC 101 approved draft amendments to paragraph 6.7.1.1 and chapter 11 of the IGF Code, with a view to adoption at MSC 102.

6.7.1. All fuel storage tanks shall be provided with a pressure relief system appropriate to the design of the fuel containment system and the fuel being carried. Fuel storage hold spaces, interbarrier spaces and tank connection spaces and tank cofferdams, which may be subject to pressures beyond their design capabilities, shall also be provided with a suitable pressure relief system. Pressure control systems specified in 6.9 shall be independent of the pressure relief systems.

New regulation 11.8 is added after existing regulation 11.7 as follows, and should apply to all ships, including existing one:

"11.8 Regulation for fuel preparation room fire-extinguishing systems-
Fuel preparation rooms containing pumps, compressors or other potential ignition sources shall be provided with a fixed fire-extinguishing system complying with the provisions of SOLAS II-2/10.4.1.1 and taking into account the necessary concentrations/application rate required for extinguishing gas fires.

**Draft amendments to the IGC and IGF Codes**

MSC 101 approved draft amendments to paragraph 6.5.3.5.1 of the IGC Code, and draft amendments to paragraph 16.3.3.5.1 of the IGF Code, concerning tensile tests for materials other than aluminum alloys, with a view to adoption at MSC 102

The existing text of paragraph 6.5.3.5.1 is amended to read as follows:

"6.5.3.5 Each test shall satisfy the following requirements:
.1 tensile tests: cross-weld tensile strength shall not be less than the specified minimum tensile strength for the appropriate parent materials. For materials such as aluminium alloys, reference shall be made to 4.18.1.3 with regard to the requirements for weld metal strength of under-matched welds (where the weld metal has a lower tensile strength than the parent metal). In every case, the position of fracture shall be recorded for information;"

The existing text of paragraph 16.3.3.5.1 is amended to read as follows:

"16.3.3.5 Each test shall satisfy the following requirements:
.1 tensile tests: cross-weld tensile strength is not to be less than the specified minimum tensile strength for the appropriate parent materials. For materials such as aluminium alloys, reference shall be made to 6.4.12.1.1.3 with regard to the regulations for weld metal strength of under-matched welds (where the weld metal has a lower tensile strength than the parent metal). In every case, the position of fracture shall be recorded for information;"

**Unified interpretations of the IGF and IGC Codes**

MSC 101 approved MSC.1/Circ.1605 on Unified Interpretations of the IGF Code and MSC.1/Circ.1606 on Unified Interpretations of the IGC Code.

Content of the unified interpretations of the IGF Code:
- Ship steel protection against liquefied gas fuel (paragraph 6.3.10)
- Functional requirements applied to gas admission valves at dual fuel engines
- and gas engines (sections 12.4 and 12.5)
- Hazardous area classification of fuel storage hold spaces (section 12.5.2.1 and footnote 23)
- Alarms for loss of ventilation capacity (section 15.10.1)

Content of the unified interpretations of the IGC Code:
- Cargo tank structure heating arrangement power supply (paragraph 4.19.1.6)
- Fire test for emergency shutdown valves (paragraph 5.13.1.1.4)
- Survival crafts protection (paragraph 11.3.1)
- Tank groups in cargo area (paragraph 11.3.3)

**Carriage of additional products listed in chapter 19 of the IGC Code**

MSC 101 approved MSC.1/Circ.1607 -Carriage of chapter 19 products, amended IGC Code (resolution MSC.370(93)), on ships built after 1 July 1986 and before 1 July 2016.

Unless expressly provided otherwise, ships constructed on or after 1 July 1986 and before 1 July 2016, wanting to carry the additional products listed in chapter 19 of the amended IGC Code, may
carry these additional products subject to them being listed in the addendum to the Certificate of Fitness and meeting the requirements of the applicable IGC Code.

Furthermore, the Guidance on completing the certificate of fitness under the IBC, BCH, IGC, GC and EGC Codes (MSC-MEPC.5/Circ.14) needs to be considered when issuing the Certificate of Fitness for ships built on or after 1 July 1986 and before 1 July 2016.

**Item 10 - implementation of IMO instruments**

**Analysis of marine safety investigation reports**

MSC 101 endorsed the issuance of III.3/Circ.6 on Casualty Analysis and Statistics containing observations on reports of investigation into casualties.

Having considered proposal from IACS to review the Procedure for identifying safety issues agreed by III 5 with regard to risk assessments, MSC 101 instructed the Formal Safety Assessment Experts Group, to review the Procedure, in particular regarding the risk assessment criteria included therein, and to report to MSC 102.

**Taking of rudder bearing clearance measurements during in-water surveys**

MSC 101 concurred with the decision of III 5 not to agree with the proposal to align paragraph 5.10.3 of the Survey Guidelines under the Harmonized System of Survey and Certification (HSSC) (resolution A.1120(30)) and paragraph 5.1.7 of the annex to the Guidelines for the assessment of technical provisions for the performance of an in-water survey in lieu of bottom inspection in dry dock to permit one dry-dock examination in any five-year period for passenger ships other than ro-ro passenger ships (MSC.1/Circ.1348).

**References to the Code for Recognized Organizations in existing IMO instruments**

Subject to concurrent decision by MEPC 75, The Committee agreed that references to the Guidelines for the authorization of organizations acting on behalf of the Administration (resolution A.739(18)) and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration (resolution A.789(19)) in existing IMO instruments should be replaced with references to the mandatory parts of the Code for Recognized Organizations (RO Code) (resolution MSC.349(92).

In this context, the Committee also agreed that both resolutions A.739(18) and 789(19) should be revoked by relevant decision of the Assembly.

**Review of the Model Agreement for the authorization of ROs acting on behalf of the Administration**

MSC 101 considered the draft MSC-MEPC.5 circular on Model Agreement for the authorization of recognized organizations acting on behalf of the Administration prepared by III 5.

IACS expressed the view that the Model Agreement is an important non-mandatory document, and a careful review should be carried out by III 6 to ensure none of its provisions go beyond those of the RO Code.

It stressed the fact that the Model Agreement should remain fully in line with the mandatory provisions of the RO Code and instructed III 6 to further consider and review the draft Model Agreement.
**Item 11 - Navigation, communications and search and rescue**

MSC 101 adopted Resolution MSC.467(101) – guidance on the definition and harmonization of the format and structure of maritime services in the context of E-navigation and approved MSC.1/Circ.1610 -Initial descriptions of Maritime Services in the context of e-navigation.

It also approved MSC.1/Circ.1612 - Guidance for navigation and communication equipment intended for use on ships operating in polar waters.

MSC 101 approved MSC.1/Circ.1222/Rev.1 - Guidelines on annual testing of voyage data recorders (VDR) and simplified voyage data recorders (S-VDR) (MSC.1/Circ.1222).

**Item 12 - Ship design and construction**

**Safe mooring operations for ships**

*Amendments to SOLAS regulation II-1/3-8*

MSC 101 approved draft amendments to SOLAS regulation II-1/3-8 (Towing and mooring equipment) prepared by SDC 6, with a view to adoption at MSC 102.

*Guidelines on the design of mooring arrangements and equipment*

MSC 101 approved, in principle, draft Guidelines on the design of mooring arrangements and the selection of appropriate mooring equipment and fittings for safe mooring, and the associated draft MSC circular, with a view to final approval in conjunction with the adoption of the draft amendments to SOLAS regulation II-1/3-8 abovementioned.

*Guidelines for inspection and maintenance of mooring equipment*

MSC 101 approved, in principle, the draft Guidelines for inspection and maintenance of mooring equipment and the associated draft MSC circular, with a view to final approval in conjunction with the adoption of the draft amendments to SOLAS regulation II-1/3-8 referred to in paragraph 12.2. The guidelines are expected to take effect on 1 January 2024, upon entry into force of the associated SOLAS amendments.

*Guidance on shipboard towing and mooring equipment*

MSC 101 approved the draft amendments to the Guidance on shipboard towing and mooring equipment (MSC.1/Circ.1175), with a view to approval in conjunction with the adoption of the draft amendments to SOLAS regulation II-1/3-8.

The safe towing load (TOW) used for normal towing operations should be equal to 80% of the design load for the purpose of marking, following a similar provision for the determination of the safe working load (SWL) requiring that SWLs marked on equipment should be equal to the ship design minimum breaking load (MBLSD).

SDC 6 Group noted that:

- for the purpose of selection of equipment, the SWL should not be less than the MBLSD; and
for the purpose of marking, the SWL should not be greater than the MBLSD,

It agreed on the following text:

"4.6.1 The SWL, for the purpose of marking, should be equal to the ship design minimum breaking load of the mooring line according to appendix A."

Similar clarification should be made regarding safe towing load (TOW), i.e. paragraph 3.6.1 of draft revised Guidance, as follows:

"3.6.1 For the purpose of marking, TOW used for normal towing operations should not exceed be equal to 80% of the design load as given in 3.3.1(1) and TOW used for other towing operations should not exceed be equal to 80% of the design load as given in 3.3.1(2). For fittings used for, both, normal and other towing operations, the greater of the safe towing loads should be used."

The appendix to the annex to the revised Guidance merely provided the minimum value of MBLSD and the MBLSD should be determined by the designer.

"1.4 Sections 2 and 3 specify the minimum recommended number and minimum strength of mooring lines (MBLSD)."

Similar clarification should be made regarding:

"1.5 Section 2 also specifies the minimum recommended strength of tow lines (MBLSD). The designer should consider to verify the adequacy of the tow line strength for the considered ship."

The amended guidance is expected to take effect on January 2024 upon entry into force of the associated SOLAS amendments.

**Review of SOLAS chapter II-1 to ensure consistency with regard to watertight integrity**

MSC 101 approved draft amendments to SOLAS chapter II-1, with a view to adoption at MSC 102.

Draft amendments to SOLAS chapter II-1 prepared by SDC 6 ensure consistency between parts B-2 and B-4 of SOLAS chapter II-1 with regard to watertight integrity. MSC 101 endorsed the approach to amend SOLAS regulations II-1/7-2.5 (part B-1), as well as the application provisions in regulation II-1/1.3.

**Carriage of more than 12 industrial personnel on board vessels engaged on international voyages**

MSC 101 noted the confusion, ambiguity and differing interpretations among delegations at SDC 6 concerning the use of an aggregated number of passengers, special personnel and industrial personnel as the criterion to invoke the application of the draft International Code of Safety for Ships Carrying Industrial Personnel (IP Code)

MSC 99 had decided

"the aggregated total maximum number of passengers, industrial personnel and special personnel which may be carried on board in order not to require compliance with the new code should be 12" (MSC 99/22, paragraph 10.17)."
SDC 6 raised a number of questions on the implication of this decision related in particular to the "kick-in" parameter for the new IP Code.

In the decision from MSC 99, special personnel are also included in the aggregated number, possibly because it was the wish of the Committee that a ship certified in accordance with the draft new IP Code should also be allowed to carry special personnel.

The Committee reconfirmed the decision of MSC 99 to use an aggregated number comprising passengers, special personnel and industrial personnel as the qualifying criterion for the application of the draft IP Code.

Special personnel, when carried on board a ship subject to the IP Code, must also meet the training requirements for industrial personnel in accordance with the provisions of the IP Code.

**Unified interpretations of the 2008 IS Code**

MSC 101 approved MSC.1/Circ.1537/Rev.1 - Unified interpretations of the 2008 IS Code which includes revised unified interpretations to section 2.3 (Severe wind and rolling) and section 3.4.2 (Assumptions for calculating loading conditions).

**Unified interpretations relating to the 1988 Load Line Protocol**


MSC.1/Circ.1535 has been corrected to include the interpretation of LL regulation 27(13)(e).

The proposed revision to the unified interpretation of LL regulation 27(13)(e), is limited to "unprotected openings":

"Unprotected openings include ventilators (complying with regulation 19(4) of the International Convention on Load Lines, 1966) that for operational reasons have to remain open to supply air to the engine room, or emergency generator room or closed ro-ro and vehicle spaces (if the same is considered buoyant in the stability calculation or protecting openings leading below) for the effective operation of the ship. Where it is not technically feasible to treat some closed ro-ro and vehicle space ventilators as unprotected openings, Administrations may allow an alternative arrangement that provides an equivalent level of safety."

It is clear that ventilators that are not fitted with weathertight covers (i.e. those ventilators exempted from being fitted with weathertight covers under LL regulation 19(3) due to their excessive height) are to be considered as downflooding points and therefore do not need an interpretation.

However, the concern is with respect to the treatment of ventilators as a downflooding point that:

.1 are fitted with weathertight closing appliances (as per LL regulation 19(4), excluding the exemption provided therein); and

.2 for operational reasons, must remain open to supply air to the space they serve.

Based on the above discussion and to provide consistency with the two types of ventilators (protected and unprotected) addressed by MSC.1/Circ.1537 and MSC.1/Circ.1539, which refer to
"openings which cannot be or are incapable of being closed weathertight", the draft unified interpretation of LL regulation 27(13)(e), is revised so as to delete the first reference to the term "Unprotected" so that it would read:

"Unprotected Openings include ventilators (complying with regulation 19(4) of the International Convention on Load Lines, 1966) that for operational reasons have to remain open to supply air to" ....

**Unified interpretations of SOLAS chapter II-1**

MSC 101 approved a revision of the Unified interpretations of SOLAS chapter II-1 (MSC.1/Circ.1539), for dissemination as MSC.1/Circ.1539/Rev.1.

It includes unified interpretations to SOLAS regulations II-1/22-1 and II-2/21.4.13 on safe return to port requirements for flooding detection systems applicable to ships contracted for construction on or after 1 July 2019.

**Interpretation**

For passenger ships carrying 36 or more persons and subject to SOLAS regulation II-1/8-1, the Safe Return To Port (SRtP) requirements of SOLAS regulation II-2/21.4 apply to both:

.1 the flooding detection systems in the spaces as defined in paragraph 6 of MSC.1/Circ.1291; and

.2 the liquid level monitoring systems, which are used as, or replace, the flooding detection systems, as specified in paragraph 7 of MSC.1/Circ.1291.

Therefore, the exemption as given in paragraph 7 of MSC.1/Circ.1291 does not apply in the context of SRTP.

Therefore, for systems noted in sub-paragraph .2 above, the phrase "excluded from these requirements" in paragraph 7 of MSC.1/Circ.1291 is not an exclusion from the general provision in SOLAS regulation II-2/21.4.13 (remain operational in the event of fire). This exclusion pertains only to the detailed provisions in MSC.1/Circ.1291."

**Guidelines for wing-in-ground craft**

MSC 101 approved a revision of the Guidelines for wing-in-ground craft (MSC.1/Circ.1592), for dissemination as MSC.1/Circ.1592/Rev.1.

**Item 13 - Pollution prevention and response**

MEPC 74 adopted resolution MEPC.320(74) on 2019 Guidelines on consistent implementation of the 0.50% m/m sulphur limit under MARPOL Annex VI developed by PPR 6, containing provisions addressing possible safety implications relating to fuel oils meeting the 0.50% m/m sulphur limit.

Having noted the concurrent approval by MEPC 74, MSC 101 approved MSC-MEPC.5/Circ.15 - Delivery of compliant fuel oil by suppliers.
**Item 14 - Ship systems and equipment**

**Amendments to the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III (MSC.1/Circ.1212)**

MSC 101 approved MSC.1/Circ.1212/Rev.1- Revised guidelines on alternative design and arrangements for SOLAS chapters II-1 and III.

It considered that the draft Revised guidelines were intended to support the existing prescriptive requirements and, since there were no prescriptive regulations on CO2 concentration in the relevant instruments, the CO2 concentration limitation should be removed.

Hence, having recognized that the work on the ventilation of survival craft is ongoing and having agreed that the 5,000 ppm limitation issue could be reconsidered at a later stage, MSC 101 agreed to modify draft EP 1 under FR 8 by deleting the following text:

"that prevent exposure to a long-term CO2 concentration of more than 5,000 ppm for at least 24 hours"

**Interim guidelines on LSA and arrangements for ships operating in polar waters**

MSC 101 approved MSC.1/Circ.1614 – Interim guidelines on life-saving appliances and arrangements for ships operating in polar waters.

MSC 101 agreed that paragraph 3.7 of the draft Interim guidelines applied to all types of survival craft and modified paragraph 3.7.2, as follows:

"3.7.2 Survival craft should provide a habitable environment for all persons on board that prevent exposure to a long-term CO2 concentration of more than 5,000 ppm for the maximum expected time of rescue. The ventilation should be considered in context with heating requirements to achieve a habitable temperature in the survival craft."

**Ventilation of survival craft**

MSC 101 adopted Resolution MSC.472(101) – amendments to the revised recommendation on testing of life-saving appliances (Res MSC.81(70)), regarding ventilation on totally enclosed lifeboats and the draft amendments concerning survival craft other than totally enclosed lifeboats.

**Interim guidelines for minimizing the incidence and consequences of fires in ro-ro spaces and special category spaces of new and existing ro-ro passenger ships**

MSC 101 approved MSC.1/Circ.1615 - Interim guidelines for minimizing the incidence and consequences of fires in ro-ro spaces and special category spaces of new and existing ro-ro passenger ships.

Some interesting topics of the guidelines are summarized hereinafter:

- Prevention/ignition
  - Inspection and maintenance of ship’s power supply equipment and cables
  - Maintenance plan for electrical cables and their sockets in ro-ro and special category spaces intended for power supply to vehicles or cargo units
  - Secured (metal protective cased) cables
• Shock/waterproof rating of electrical connections  
• Earth fault breakers / individual circuit breakers  
• Only crew connections  
• Socket outlets  
• Strengthening of the requirement for elimination of sources of ignition

Detection and decision  
• Addressable type fixed fire detection and alarm systems  
• Video monitoring  
• Flame detectors (infrared and/or ultraviolet)

Extinguishment  
• Revision of the requirements for fire-fighters' outfits and equipment for ro-ro passenger ships  
• Remote control of fixed water-based fire-fighting systems  
• Appropriate training and drills  
• Functional requirements for positioning of sprinklers and nozzles, taking into account cargo distribution, services, structural elements, etc. providing satisfactory performance with respect to both activation time and water distribution  
• Securing access for fire-fighting and systems for smoke extraction  
• Fire-fighting needs related to electrical powered vehicles and alternatively fuelled vehicles  
• Fire integrity of ro-ro spaces and special category spaces  
• Openings in relation to fire and smoke spread from the ro-ro space  
• Stowage requirements for alternative fuelled vehicles

Unified interpretations

SOLAS chapter II-2

MSC 101 approved MSC.1/Circ.1616 - Unified interpretations of SOLAS chapter II-2, concerning regulations II-2/9.2 (Containment of fire, thermal and structural boundaries), II-2/9.7.5 (Containment of fire, ventilation systems, exhaust ducts from galley ranges) and II-2/10.10.4 (Fire-fighting, fire-fighter's outfits, fire-fighter's communication).

IGC Code

MSC 101 approved MSC.1/Circ.1617 on Unified interpretations of the IGC Code, concerning paragraphs 11.3.6 (Fire protection and extinction, water-spray system), and 11.4.8 (Fire protection and extinction, dry chemical powder fire-extinguishing systems).

The requirements for water-spray systems are prescribed in paragraph 11.3.6 of the IGC Code, as follows:

"11.3.6 All pipes, valves, nozzles and other fittings in the water-spray system shall be resistant to corrosion by seawater. Piping, fittings and related components within the cargo area (except gaskets) shall be designed to withstand 925°C. The water-spray system shall be arranged with in-line filters to prevent blockage of pipes and nozzles. In addition, means shall be provided to back-flush the system with fresh water."

The definition of "cargo area" is provided in 11.1.4 of the IGC Code, as follows:

"11.1.4 For the purposes of firefighting, any weather deck areas above cofferdams, ballast or void spaces at the after end of the aftermost hold space or at the forward end of the forwardmost hold space shall be included in the cargo area."

In this regard, the question had been raised as to whether the weather deck areas above "F.O. tanks" were regarded as part of the "cargo area" and, consequently, whether the piping, fittings
and related components of a water-spray system in such an area were to be designed to withstand 925°C.

Interpretation

Where "F.O. tanks" are installed at the after end of the aftermost hold space or at the forward end of the forwardmost hold space instead of cofferdams as allowed for in paragraphs 3.1.2 and 3.1.3 of the IGC Code, the weather deck area above these tanks shall be regarded as a "cargo area" for the purpose of applying paragraph 11.3.6 of the IGC Code, i.e. piping, fittings and related components of water-spray systems shall be designed to withstand 925°C.

**SOLAS chapter III**

MSC 101 approved **MSC.1/Circ.1618 - Unified interpretations of SOLAS chapter III** concerning regulations III/20.11 (Operational readiness, maintenance and inspections, maintenance, thorough examination, operational testing, overhaul and repair of lifeboats, rescue boats and fast rescue boats, launching appliances and release gear), III/22.1.1 and III/32.1.1 (Personal life saving appliances, lifebuoys).

Interpretation

Regulation 20.11 – Operational readiness, maintenance and inspections, maintenance, thorough examination, operational testing, overhaul and repair of lifeboats, rescue boats and fast rescue boats, launching appliances and release gear

The thorough examinations, overhauls and operational tests, carried out at intervals of at least once every five years, should be done in the presence of a surveyor.

**SOLAS regulations II-1/28, II-1/29 and II-1/30**

MSC 101 approved **MSC.1/Circ.1416/Rev.1 - Unified interpretations of SOLAS regulations II-1/28, II-1/29 and II-1/30**.

The UIs would apply from 1 January 2020, noting that the modifications emanated from IACS UI SC242, which stipulated "ships contracted for construction on or after 1 January 2020", with a view to avoiding difficulties in the industry due to inconsistent implementation dates.

**Guidelines for developing operation and maintenance manuals for lifeboat systems**

MSC 101 approved draft amendments to the Guidelines for developing operation and maintenance manuals for lifeboat systems (MSC.1/Circ.1205), for dissemination as MSC.1/Circ.1205/Rev.1.

**Use and fitting of retro-reflective materials on life-saving appliances**

The Plenary approved the draft Assembly resolution on Amendments to the Use and fitting of retro-reflective materials on life-saving appliances (resolution A.658(16)), for submission to A 31 with a view to adoption.

**Item 17 - formal safety assessment**
MSC 101 agreed to the holding of a meeting of the FSA Experts Group at IMO Headquarters from 18 to 20 November 2019.

It is instructed to review the FIRESAFE I and II studies regarding fire safety of ro-ro decks on passenger ships and the risk assessment criteria in the Procedure for identifying safety issues.

**Item 21 - Work programme - Proposals for new outputs**

MSC 101 agreed to include in its post-biennial agenda:
- an output on "Development of amendments to SOLAS chapter II-2 and MSC.1/Circ.1456 addressing fire protection of control stations on cargo ships",
- an output on "Development of amendments to paragraph 8.3.5 and annex 1 of the 1994 and 2000 HSC Codes",
- an output on "Development of design and prototype test requirements for the arrangements used in the operational testing of free-fall lifeboat release systems without launching the lifeboat",
- an output on "Development of SOLAS amendments for mandatory carriage of electronic inclinometers on container ships and bulk carriers",
- an output on "Development of provisions to prohibit the use of perfluorooctane sulfonic acid (PFOS) for fire-fighting onboard ships"
- an output on "Development of amendments to VDR performance standards and carriage requirements", to require that all new VDRs and Simplified Voyage Data Recorder (S-VDRs) installations be float free and resolutions MSC.333(90) on Adoption of revised performance standards for shipborne voyage data recorders (VDRs), and MSC.163(78), on Performance standards for shipborne simplified voyage data recorders (S-VDRs) to include the recording of all communications between control stations and both sides of all communications with the bridge.

MSC 101 agreed to include in the biennial agenda of the SSE for 2020-2021 and the provisional agenda for SSE 7:
- an output on "Revision of the Guidelines for the maintenance and inspections of fixed carbon dioxide fire-extinguishing systems (MSC.1/Circ.1318)",
- an output on "Amendments to SOLAS chapter III, LSA Code and resolution MSC.81(70) to remove the applicability of the requirements to launch free-fall lifeboats with the ship making headway at speeds up to 5 knots in calm water"

MSC 101 had for its consideration a proposal to improve the reliability of corrosivity tests of solid bulk cargoes for the MHB (CR) hazard in the IMSBC Code. It instructed CCC 6 to consider the proposal under its existing agenda item 5 on "Amendments to the IMSBC Code and supplements".

MSC 101 agreed to include in the biennial agenda of the CCC Sub-Committee for 2020-2021 and the provisional agenda for CCC 7 an output on "Amendments to the International Code for the Safe Carriage of Grain in Bulk (resolution MSC.23(59)) to introduce a new class of loading conditions for special compartments", in order to introduce a new class of loading conditions for "specially suitable compartment, partly filled in way of the hatch opening, with ends untrimmed" and specify the requirements under which grain may be safely carried in such compartments.

**Item 23 - Any other business**

*Outcome of the inaugural meeting of IQARB in the trial phase*
MSC 100 agreed to the active participation of the Secretariat in the trial phase of the International Quality Assessment Review Board (IQARB).

IQARB functions would be to review the certification process of the quality management systems of IACS members, including performance of Accredited Certification Bodies (ACBs), with a view to providing confidence to interested parties of the independence and integrity of the classification societies/ROs’ certification by the ACBs.

Flag States could voluntarily use the information provided by IQARB as part of their duty in monitoring/oversight of ROs in terms of the applicable provisions of the III and RO Codes.

Advancing international collaboration for quiet ship design and technologies to protect the marine environment

Canada’s intention is to hold policy discussions with interested Member States on the contents of a new output proposal for MEPC 75, aiming to address the identified policy needs related to underwater vessel noise.

* * *

Correspondence groups established by MSC 101

Correspondence group on the development of further measures to enhance the safety of ships

terms of reference:

- further consider the development of mandatory requirements regarding the reporting of confirmed cases where oil fuel suppliers have failed to meet the flashpoint requirements of the Organization, taking into account that feedback should also be provided to the supplier;

- further consider the development of mandatory requirements to ensure parties take action as appropriate against oil fuel suppliers in confirmed cases of deliveries of oil fuel that does not comply with the requirements specified in SOLAS regulation II-2/4.2.1, taking into account regulation 18.9.4 of MARPOL Annex VI;

- further consider the development of mandatory requirements regarding the documentation of the flashpoint of the actual fuel batch when bunkering providing a statement that the oil fuel delivered complies with regulation SOLAS II-2/4.2.1;

- further consider the development of guidelines for ships to address situations where they have indicative test results suggesting that the oil fuel supplied may not comply with regulation SOLAS regulation II-2/4.2.1;

* * *