



MSC 99 - 16 TO 25 MAY 2018
MAJOR OUTCOMES OF THE 99TH SESSION OF THE IMO MARITIME SAFETY (MSC)

SUMMARY

Maritime Safety Committee held its 99th session from 16 to 25 May 2018.

MSC 99 has adopted the following resolutions (**item 3**) :

- MSC.436(99) – Amendments to SOLAS, 1974, regulations II-1/1 and II-1/8-1, chapter IV of, and the appendix ;
- MSC.437(99) – Amendments to the international code for application of fire test procedures, 2010 (2010 FTP Code) ;
- MSC.438(99) – Amendments to the international code of safety for high-speed craft, 1994 (1994 HSC Code);
- MSC.439(99) – Amendments to the international code of safety for high-speed craft, 2000 (2000 HSC Code);
- MSC.440(99) – amendments to the international code for the construction and equipment of ships carrying dangerous chemicals in bulk (IBC Code).;
- MSC.441(99) – Amendments to the international code for the construction and equipment of ships carrying liquefied gases in bulk (IGC Code) ;
- MSC.442(99) – amendments to the international maritime dangerous goods (IMDG) Code
- MSC.443(99) – Amendments to part A of the international code on intact stability, 2008 (2008 IS Code) (under the 1974 SOLAS convention);
- MSC.444(99) – Amendments to part A of the international code on intact stability, 2008 (2008 IS code) (under the 1988 Load Lines protocol);
- MSC.445(99) – amendments to the code of safety for special purpose ships, 2008 (2008 SPS Code);
- MSC.446(99) – amendments to the code for the construction and equipment of ships carrying dangerous chemicals in bulk (BCH Code);
- MSC.447(99) – Amendments to the Code for Existing Ships Carrying Liquefied Gases in Bulk (EGC Code).

It has also approved

- MSC.1/Circ.1588 Revised emergency response procedures for ships carrying dangerous goods (EmS Guide) (**item 3**);
- MSC.1/Circ.1589 Guidelines on operational information for masters in case of flooding for passenger ships constructed before 1 January 2014 (**item 3**);
- approved MSC.1/Circ.1532/Rev.1 on Revised Guidelines on operational information for masters of passenger ships for safe return to port (MSC.1/Circ.1532) (**item 3**);
- MSC.1/Circ.1590 Unified interpretation of paragraph 13.3.5 of the IGC Code (as amended by resolution MSC.370(93))(**item 8**) ;
- MSC.1/Circ.1591 Unified interpretations of the IGF Code (**item 8**) ;
- MSC.1/Circ.1592 Guidelines for wing-in-ground craft (**item 10**);
- MSC.1/Circ.1376/Rev.3 - Continuity of service plan for the LRIT system (**item 12**) ;
- MSC.1/Circ.1593 - Interim guidelines for the harmonized display of navigation information received via communication equipment (**item 12**).

MSC 99 has agreed to the framework for the regulatory scoping exercise, including the aim and objective, the preliminary definition of MASS and degrees of autonomy, the list of mandatory instruments to be considered, the applicability in terms of type and size of ships, the methodology for the exercise and the plan of work (**item 5**).

It has approved, in principle, the draft MSC resolution on Revised guidelines for verification of conformity with goal-based ship construction standards for bulk carriers and oil tankers, with a view to subsequent adoption at MSC 100, introducing qualitative elements in the maintenance verification program (**item 6**).

MSC 99 has agreed that III.2/Circ.2 on Action to be taken by port States on the required updates of ECDIS should be revoked as from 1 July 2018 (**item 9**).

It has pursued its work on the availability of passenger ships' electrical power supply in cases of flooding from side raking damage and on Carriage of more than 12 industrial personnel on board vessels engaged on international voyages (**item 10**).

The maritime mobile satellite services provided by the Iridium for use in the GMDSS has been recognized through Res.MSC.451(99) – statement of recognition of maritime mobile satellite services provided by Iridium satellite LLC. It has also adopted Res.MSC.1/Circ.1595 E-Navigation Strategy Implementation Plan – Update 1. (**item 12**).

Item 2 - Decisions of other IMO bodies

An Intersessional Meeting on Consistent implementation of regulation 14.1.3 of MARPOL Annex VI had been scheduled to take place from 9 to 13 July 2018 and the Meeting will report its outcome to MEPC 73.

MEPC 73 will report to MSC 100 on safety issues that may be identified with regard to low-sulphur oil fuel.

Item 3 - Consideration and adoption of amendments to mandatory instruments

Amendments to SOLAS regulations II-1/1 and II-1/8-1

MSC 99 recognized that the amendments to SOLAS regulations II-1/1 and II-1/8-1 adopted by resolution MSC.421(98) should be superseded by the draft amendments to regulations II-1/1 and II-1/8-1 adopted at this session. Consequently, MSC 99 has adopted **Res.MSC.436(99) – Amendments to SOLAS, 1974.**

Chapter II-1 - Construction – structure, subdivision and stability, machinery and electrical installations

Regulation 1 – Application

Regulation 8-1 – System capabilities and operational information after a flooding casualty on passenger ships

- Application
- Availability of essential systems in case of flooding damage
- Operational information after a flooding casualty

The amendments shall enter into force on 1 January 2020.

Amendments to SOLAS chapter IV and the appendix

MSC 98 had approved draft amendments to chapter IV of, and the appendix to, the 1974 SOLAS Convention, replacing all references to "Inmarsat" with references to a "recognized mobile satellite service".

MSC 99 agreed that for the purpose of clarity the words "ship earth station providing a recognized mobile satellite service" should be replaced with the words "recognized mobile

satellite service ship earth station" in the text of the draft amendments to chapter IV of, and the appendix to, the 1974 SOLAS Convention, as well as in the text of the draft consequential amendments to the 1994 and 2000 HSC and 2008 SPS Codes.

MSC 99 MSC 99 has adopted the corresponding amendments of SOLAS Chapter IV in **Res.MSC.436(99)**

Amendments to the 2010 FTP Code

MSC 98 had approved draft amendments to annex 3 to the 2010 FTP Code, concerning fire protection materials and required approval test methods for passenger ships and high-speed craft.

MSC 99 adopted **Res.MSC.437(99) – Amendments to the international code for application of fire test procedures, 2010 (2010 FTP Code).**

The amendments shall enter into force on 1 January 2020.

Amendments to the 1994 HSC Code and to the 2000 HSC Code

MSC 98, following the approval of the draft amendments to chapter IV of, and the appendix to, the 1974 SOLAS Convention, had approved draft consequential amendments to the 1994 and 2000 HSC Code.

Hence, MSC 99 adopted the two following resolutions :

- **Res.MSC.438(99) – Amendments to the international code of safety for high-speed craft, 1994 (1994 HSC Code)**
- **Res.MSC.439(99) – Amendments to the international code of safety for high-speed craft, 2000 (2000 HSC Code)**

The amendments shall enter into force on 1 January 2020.

Amendment to the IBC Code

MSC 98 had approved a draft amendment to the model form of the Certificate of Fitness under the IBC Code.

MSC 99 adopted **Res.440(99) – amendments to the international code for the construction and equipment of ships carrying dangerous chemicals in bulk (IBC Code).**

The amendments shall enter into force on 1 January 2020.

Amendment to the IGC Code

MSC 98 had approved a draft amendment to the model form of the Certificate of Fitness under the IGC Code.

MSC 99 adopted **Res.MSC.441(99) – Amendments to the international code for the construction and equipment of ships carrying liquefied gases in bulk (IGC Code).**

The amendments shall enter into force on 1 January 2020.

Amendments to the IMDG Code

Draft amendments to the IMDG Code had been agreed by CCC 4. These guidelines renew entirely the code.

MSC 99 has adopted **Res.MSC.442(99) – amendments to the international maritime dangerous goods (IMDG) Code.**

The amendments shall enter into force on 1 January 2020, noting that Contracting Governments to the Convention may apply the aforementioned amendments in whole or in part on a voluntary basis from 1 January 2019.

Amendment to the 2008 IS code, mandatory under the 1974 SOLAS convention and the 1988 Load Lines Protocol

MSC 98 had had approved a draft amendment to the title of chapter 2 of part A of the 2008 IS Code, agreeing that the footnote to the title of chapter 2 of part A to the 2008 IS Code, as

adopted by resolutions MSC.413(97) (SOLAS) and MSC.414(97) (Load Lines), should be deleted.

MSC 99 adopted :

- **Res.MSC.443(99) – Amendments to part A of the international code on intact stability, 2008 (2008 IS Code) (under the 1974 SOLAS convention)**
- **Res.MSC.444(99) – Amendments to part A of the international code on intact stability, 2008 (2008 IS code) (under the 1988 Load Lines protocol)**

It agreed that each of this amendment and the amendments adopted respectively by Res.MSC.413(97) and Res. MSC.414(97) should be read and interpreted together as one single document.

Amendment to the 2008 SPS Code

MSC 98, following the approval of the draft amendments to chapter IV of, and the appendix to, the 1974 SOLAS Convention (see above), had considered and approved, in principle, a draft consequential amendment to the Record of Equipment under the 2008 SPS Code.

MSC 99 has adopted **Res. MSC.445(99) – amendments to the code of safety for special purpose ships, 2008 (2008 SPS Code).**

This amendment shall take effect on 1 January 2020, in conjunction with the entry into force of the amendments to chapter IV of, and the appendix to, the 1974 SOLAS Convention.

Amendment to the BCH Code

MSC 98 had approved a draft amendment to the model form of the Certificate of Fitness under the BCH Code.

MSC 99 has adopted **Res.MSC.446(99) – amendments to the code for the construction and equipment of ships carrying dangerous chemicals in bulk (BCH Code).**

This amendment shall take effect on 1 January 2020, in conjunction with the entry into force of the amendments to the model forms of the Certificates of Fitness under the IBC and IGC Codes.

Amendment to the EGC Code

MSC 98 had approved a draft amendment to the model form of the Certificate of Fitness under the EGC Code.

MSC 99 has adopted **Res.MSC.447(99) – Amendments to the Code for Existing Ships Carrying Liquefied Gases in Bulk (EGC Code).**

This amendment to the model form of the Certificate of Fitness under the EGC Code should take effect on 1 January 2020, in conjunction with the entry into force of the amendments to the model forms of the Certificates of Fitness under the IBC and IGC Codes.

Amendment to the GC Code

MSC 98 had approved a draft amendment to the model form of the Certificate of Fitness under the GC Code.

MSC 99 has adopted **Res.MSC.447(99) – Amendments to the code for the construction and equipment of ships carrying liquefied gases in bulk (GC Code).**

This amendment to the model form of the Certificate of Fitness under the GC Code should take effect on 1 January 2020, in conjunction with the entry into force of the amendments to the model forms of the Certificates of Fitness under the IBC and IGC Codes.

Amendment to the SPS Code (resolution A.534(13))

Following the approval of the draft amendments to chapter IV of, and the appendix to, the 1974 SOLAS Convention, MSC 98 had requested the Secretariat to prepare draft consequential amendments to the Code of Safety for Special Purpose Ships (resolution A.534(13)).

MSC 99 has requested the Secretariat to prepare a draft MSC resolution on amendments to the SPS Code (resolution A.534(13)), incorporating the amendments adopted by resolution

MSC.183(79) and approved by circulars MSC/Circ.478 and MSC/Circ.739, for consideration at MSC 100.

Consolidated version of the EmS Guide

MSC 96, taking into account that the Emergency Response Procedures for Ships Carrying Dangerous Goods (EmS) Guide (MSC/Circ.1025) had been amended several times, had instructed the CCC Sub-Committee to prepare a new draft revised MSC circular containing a consolidated version of the EmS Guide.

A consolidated version of the EmS Guide was agreed by CCC 4, with a view to approval at MSC 99, in conjunction with the adoption of the draft amendments to the IMDG Code.

MSC 99 has approved **MSC.1/Circ.1588 Revised emergency response procedures for ships carrying dangerous goods (EmS Guide)**.

Guidelines on operational information for masters in case of flooding for passenger ships constructed before 1 January 2014

SDC 5 confirmed the application date for the draft SOLAS regulation II-1/8-1.3 and finalized the draft guidelines on stability computers and shore-based support for passenger ships constructed before 1 January 2014.

MSC 99 has approved **MSC.1/Circ.1589 Guidelines on operational information for masters in case of flooding for passenger ships constructed before 1 January 2014**.

Passenger ships constructed before 1 January 2014 shall comply with SOLAS regulation II-1/8-1.3.1 not later than the first renewal survey after five years after the date of entry into force of the amendments to SOLAS regulation II-1/8-1, i.e. not later than the first renewal survey after 1 January 2025.

MSC 99 noted that no amendments to the Guidelines on operational information for masters of passenger ships for safe return to port by own power or under tow (MSC.1/Circ.1400) are necessary.

Revised Guidelines on operational information for masters of passenger ships for safe return to port

MSC 99 has **approved MSC.1/Circ.1532/Rev.1 on Revised Guidelines on operational information for masters of passenger ships for safe return to port (MSC.1/Circ.1532)** and agreed to keep it in abeyance until the date of the entry into force of the amendments to SOLAS regulation II-1/8-1.3 adopted at this session, i.e. 1 January 2020.

Item 5 - regulatory scoping exercise for the use of maritime autonomous surface ships (MASS)

MSC 98 agreed to include in its 2018-2019 biennial agenda and the provisional agenda for MSC 99 an output on "Regulatory scoping exercise for the use of Maritime Autonomous Surface Ships (MASS)", with a target completion year of 2020.

The regulatory scoping exercise should be conducted as an exploratory research with focus on the identification of relevant instruments and regulations that are related to MASS and, in particular, those which may have an impact on, or may limit the introduction of, MASS. It should not be intended as a regulatory drafting exercise, which should follow at the next stage.

MSC identified the following key points to be considered: the human element; the work plan; the legal aspects, including those regarding liability; the definition of autonomous ship; the different levels of automation; and whether to include subsurface vessels.

MSC decided that the regulatory scoping exercise should take into account different levels of automation and cover semi-autonomous ships as well as unmanned ships.

ITF, ISMA and others plead for guidelines to protect the safety of shipping and the marine environment from the risk of unregulated activities, as well as risk of collision between conventional ships and remotely controlled or unmanned ships, affirmatively establish by circular, or other means. These guidelines should state that remotely controlled or unmanned ships are not in compliance with existing international regulations, and not permitted to operate

on international voyages until an international regulatory framework governing their operation has been adopted and is in effect.

They estimated that consideration should be given to a circular, or other means, to affirmatively establish that remotely controlled or unmanned ships are not in compliance with existing international regulations, and not permitted to operate on international voyages, on the high seas or international waters, until such time as an international regulatory framework governing their operation has been adopted and is in effect. But this approach was not supported.

Many delegates declared that ships with remote control from shore or with partially autonomous functions would be widely used for a long time before the realization of "unmanned operation".

The reliability, safety and economic benefits in actual commercial usage would determine the future role of remote monitoring and control, and the potential for a progression to unmanned ships.

In a later phase, ships may be capable of operating in dual mode relying on semi-autonomous systems under routine circumstances with higher levels of onboard human involvement under non-routine circumstances such as high traffic, congested waters, rough weather, equipment failure, or unforeseen circumstances.

At this time, the focus should be on identifying functional requirements for various operating scenarios and a regulatory framework for ensuring that the semi-autonomous systems managing those functions are safe and reliable.

Having fully autonomous unmanned ships as the primary goal of a regulatory framework at this time, would be is an unrealistic time-consuming topic.

Framework of the regulatory scoping exercise

MSC 99 has agreed to the framework for the regulatory scoping exercise, including the aim and objective, the preliminary definition of MASS and degrees of autonomy, the list of mandatory instruments to be considered, the applicability in terms of type and size of ships, the methodology for the exercise and the plan of work.

There is a need to differentiate between truly autonomous ships operated by artificial intelligence and/or pre-programmed systems completely independent of human control, and semi-autonomous automated ships using automated systems capable of providing decision support and/or performing ship board functions under the supervision and management of a human operator.

Aim and objective

MSC 99 acknowledged that the work on MASS should be user-driven and not technology driven, and that, given the different interpretations of MASS, clear definitions were needed as a priority in order to move forward with the exercise.

The exercise should take a holistic approach, taking into account the human element, procedures and technology.

The objectives are organized into two parts, a first step for the identification of provisions in IMO instruments and a second step for the subsequent analysis.

Distinction should not be made between manned and unmanned ships, given the holistic approach to be used

Provisional definitions

MSC 99 agreed on a general definition of MASS for the purpose of the regulatory scoping exercise only and four degrees of autonomy. These preliminary definitions may be revised based on experience gained.

"For the purpose of the regulatory scoping exercise, Maritime Autonomous Surface Ship (MASS) is defined as a ship which, to a varying degree, can operate independent of human interaction.

To facilitate the process of the regulatory scoping exercise, the degrees of autonomy are organized as follows:

- .1 Ship with automated processes and decision support: Seafarers are on board to operate and control shipboard systems and functions. Some operations may be automated.
- .2 Remotely controlled ship with seafarers on board: The ship is controlled and operated from another location, but seafarers are on board.
- .3 Remotely controlled ship without seafarers on board: The ship is controlled and operated from another location. There are no seafarers on board.
- .4 Fully autonomous ship: The operating system of the ship is able to make decisions and determine actions by itself."

MSC 99 has decided not to include direct references to remotely controlled ships as it was considered to be specified in the different degrees of autonomy.

Instruments

MSC 99 has established a preliminary list of instruments related to maritime safety and security.

Subsidiary mandatory instruments established under each parent instrument should also be considered. Non-mandatory parts of codes containing both mandatory and non-mandatory parts may also be considered, when deemed necessary.

Methodology

The regulatory scoping exercise will be organized in two steps

- .1 the identification of relevant provisions in IMO instruments in terms of applicability to MASS;
- .2 an analysis to determine the most appropriate way of addressing MASS operations, taking into account, inter alia, human element, technology and operational factors.

Plan of work

A plan of work for the regulatory scoping exercise has been drafted.

In order to contribute and facilitate coordination of work among different committees and divisions within the Secretariat, a cross-divisional MASS task force had been established under the general coordination of the Maritime Safety Division.

Interim guidelines for MASS operational issues

The development of interim guidelines for trials of MASS in particular areas, addressing, inter alia, oversight and safety issues, should be considered in order to gain experience and harmonize further developments. But it would be difficult to draft any guidelines or recommendations without having a common understanding of the different definitions and concepts of MASS.

The need for interim guidelines for MASS operational issues should be considered after the regulatory scoping exercise. MSC 99 has invited interested Member States and international organizations to submit proposals to MSC 100 related to the development of interim guidelines

Item 6 - Goal-based new ship construction standards

MSC 98 had concluded that the rectification of the identified non-conformities had been duly accomplished and that the whole process of the initial verification audit had been successfully completed in accordance with the Guidelines for verification of conformity with goal-based ship construction standards for bulk carriers and oil tankers (GBS Verification Guidelines) (resolution MSC.296(87)).

MSC 98 had tentatively scheduled the adoption of amendments to parts A and B of the GBS Verification Guidelines for MSC 100.

Progress report on the work related to GBS

MSC 99 has noted information provided by IACS giving an updated status report on recognized organizations' (ROs) Corrective Action Plan addressing GBS audit observations during the initial GBS verification audits and an updated status of work to address the IACS "common" observations, as of 28 February 2018.

MSC 99 has invited IACS to provide an update on the progress made regarding their audit observations to MSC 100.

After successful completion of the initial GBS verification audit, IACS and the 12 ROs had submitted their request for the first GBS maintenance of verification audit.

Draft amendments to the GBS Verification Guidelines

Matters related to the maintenance of verification

MSC 98 confirmed that the ROs whose rules had been verified as conforming to the goals and functional requirements of the International Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers (resolution MSC.287(87)) were to be requested to notify and make available, at least annually, any rule changes, including any errata, corrigenda or clarifications, to the Secretary-General and to all Administrations that had recognized them, as provided in paragraph 19 of the GBS Verification Guidelines.

At MSC 98, the GBS Working Group had reflected a three-year cycle for the maintenance of verification in the draft amendment to part A. The Committee further noted the proposal by the GBS Working Group that Member States and international organizations could submit proposals on other approaches for the maintenance for verification before the adoption of the draft Revised guidelines, tentatively scheduled for MSC 100.

IACS supported a three-year cycle for the GBS maintenance of verification audits, whereas Germany proposed a qualitative approach to evaluate the need for conducting a maintenance audit depending on the impact of the submitted rule changes, instead of only using a quantitative 10% criterion.

MSC 99 confirmed the three-year cycle of maintenance audits but elaborated on how to provide for flexibility by applying a qualitative approach, based on the impact of the rule changes, that would replace the current 10% quantitative criteria of auditable rule changes.

The Committee agreed to a table listing three categories of rule changes, namely:

- category 1 (corrigenda and follow-up change, no audit required);
- category 2 (minor change, audit may be required);
- category 3 (major change, audit required).

The categorization of rule changes was to be conducted by the submitter as part of the self-assessment to facilitate the work of the audit team, with the understanding that it would ultimately be the audit team who would have the freedom to decide which rule changes to audit

Category 3 rule changes deriving from a change of the basic methodology could be considered as including any rule changes affecting net and gross scantling and, in fact, included all functional requirements, such as changes to survey, access to structures, loads and others

While audits should, in principle, only be carried out every three years, the provision requiring annual rule changes to be submitted should be retained so as to keep the MSC and Administrations informed about the annual rule changes of those submitters who had successfully undergone the initial verification audit.

Hence, MSC 99 approved, in principle, the draft MSC resolution on Revised guidelines for verification of conformity with goal-based ship construction standards for bulk carriers and oil tankers, with a view to subsequent adoption at MSC 100. It should take effect one year after adoption.

The need and resource implications for unscheduled audits outside the three-year cycle was addressed. The Committee agreed that unscheduled audits should only be considered if:

- .1 an Administration requested an unscheduled audit because it believed that such rule change could result in a non-conformity;
- .2 the submitter wished to be audited for rule changes.

Revised timetable and schedule of activities for the implementation of the GBS verification scheme

MSC 99 has finalized the Revised timetable and schedule of activities for the implementation of the GBS verification scheme :

1. the first scheduled three-year maintenance of verification audit in accordance with the Revised GBS Guidelines will take place in April 2022, unless an Administration or a submitter requests an unscheduled verification audit,

2. each year, by 31 March, the Secretariat will receive rule changes from ROs and Administrations that have successfully undergone the initial verification audit;
3. the last maintenance audit in accordance with the current GBS Guidelines (resolution MSC.296(87)) is scheduled to take place from April to November 2019.

Draft interim guidelines for development and application of IMO goal-based standards safety level approach (GBS-SLA guidelines)

MSC 95, as part of the work plan for the development of the draft Interim guidelines for development and application of IMO goal-based standards safety level approach, agreed that MSC 98 should review the outcome of the SSE Sub-Committee on the development of functional requirements of SOLAS chapter III.

In considering draft functional requirements for SOLAS chapter III, MSC 98 instructed the SSE Sub-Committee to consider the following principles :

- .1 functional requirements ought to be formulated in a clear, unambiguous and objective manner;
- .2 the expected performance should be expressed as precisely as possible, preferably in quantitative terms

MSC 98 invited Member States and international organizations to submit relevant information and data to the SSE Sub-Committee for consideration and action

MSC 98 also had for its consideration a new proposal for section 14 of the draft Interim guidelines for development and application of IMO goal-based standards safety level approach on "Application of the safety level approach to the IMO rule-making process".

There have been concerns expressed throughout the development of the Interim guidelines regarding the availability of data and the complexity of the assessments required for the development of rules using the GBS-SLA. The need has been expressed for simplification of the process for rule making within the Interim guidelines.

It is noted that the Formal Safety Assessment (FSA) Guidelines (MSC.MEPC.2/Circ.12/Rev.1) already describe the various stages needed to be taken to develop rules that consider assessment of the risk involved.

Consequently, it is proposed to amalgamate sections 13 and 14 of the existing draft Interim guidelines into a single section (section 13).

FSA is a well-defined and rational process which has already demonstrated its utility in developing justifiable and robust rules at IMO, e.g. Risk Control Options (RCOs) for bulk carriers, mandating ECDIS, enhancing damage stability provisions etc. IACS notes that the process described in section 14 may be conducted in an objective and robust manner by utilizing the FSA methodology as prescribed in the IMO FSA Guidelines. The objective of GBS-SLA may be appropriately accomplished by the application of the relevant steps in the FSA Guidelines in order to ensure an unambiguous and reproducible GBS-SLA output that supports the IMO rule-making process.

The Committee agreed to amalgamate current draft sections 13 and 14 of the draft Interim GBS-SLA Guidelines

Thus, MSC 99 approved, in principle, the draft Interim guidelines for development and application of the IMO goal-based standards safety level approach, for consideration at MSC 100 with a view to approval.

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

Accidents involving non-SOLAS ships operating in polar waters, particularly in the Antarctic area, had continued to pose a significant risk to the safety of lives at sea and a threat to the marine environment and urgent action needed to be taken now rather than waiting for experience to be gained with the implementation of the Polar Code.

MSC 98 considered various proposals for mandatory requirements for non-SOLAS ships operating in polar waters, even if it is a fact that currently there is no internationally agreed legal framework regarding safety standards for non-SOLAS vessels. It decided to address this matter with a view to taking a policy decision regarding the scope of application of the second

phase of work on the Polar Code, its mandatory or recommendatory status and types of vessels to be addressed.

MSC 99 agreed that:

- .1 any safety measures for non-SOLAS vessels should, in principle, apply to both Arctic waters and the Antarctic area;
- .2 when considering specific safety measures for each type of vessel, it was necessary to consider the area of application on a case-by-case basis as there was a possibility that exemptions/exceptions may apply;
- .3 any recommendatory measures should not be limited to vessels operating in polar waters on international voyages only.

MSC 99 has instructed SDC 6 to develop recommendatory safety measures for the following types of vessels operating in polar waters:

- .1 fishing vessels of 24 m in length and over, with a view to alignment with the 2012 Cape Town Agreement;
- .2 pleasure yachts above 300 gross tonnage not engaged in trade

Item 8 - Carriage of cargoes and containers

Standards for methyl/ethyl alcohol as a marine fuel and for methyl/ethyl alcohol fuel couplings

MSC 99 invited ISO to develop:

- .1 a standard for methyl/ethyl alcohol as a marine fuel;
- .2 a standard for methyl/ethyl alcohol fuel couplings,

Amendments to parts A and A-1 of the IGF Code

The Committee considered the draft amendments to parts A and A-1 of the IGF Code prepared by CCC 4 on protection against leakage from liquefied fuel pipes outside machinery space.

In paragraph 9.5 of the draft amendments to the IGF Code a requirement for protection of liquefied fuel pipes is given. According to this requirement, liquefied fuel pipes shall be protected by a secondary enclosure able to contain leakages. It is further stated that the enclosure shall withstand the maximum pressure that may build up in the enclosure in case of leakage.

A point against the requirement of having cryogenic piping within a secondary enclosure (double-walled pipe) is the fact that inspection and maintenance of the pipes, which are normally insulated, becomes practically impossible. Furthermore, it should be taken into account that insulated piping is difficult to mount inside double-walled piping without any damage to the insulation.

Several alternative solutions to meet the functional requirements in regulation 9.2 of the IGF Code are available. As an example, a properly insulated liquid fuel pipe on open deck mounted with a well-designed drip tray will fully meet the requirement.

Some delegations were of the view that a drip tray would not be an equivalent solution to a secondary enclosure for liquefied fuel pipes on an open deck as it would not safely contain spray from a leaking pressurized liquefied fuel pipe and it would not be gas tight

MSC 99 agreed to hold the approval of the draft amendments to parts A and A-1 of the IGF Code in abeyance and instructed CCC 5 to reconsider the draft amendments to regulation 9.5.6, and report the outcome to MSC 100 as an urgent matter.

Carriage of Bauxite which may liquefy

MSC 99 endorsed the decision of CCC4 to issue **CCC.1/Circ.2/Rev.1 on Carriage of Bauxite which may liquefy.**

Carriage of ammonium nitrate based fertilizer (non-hazardous)

MSC 99 endorsed the decision of the Sub-Committee to issue **CCC.1/Circ.4 on Carriage of ammonium nitrate based fertilizer (non-hazardous).**

Unified interpretations of the IGC and IGF Codes

MSC 99 approved :

- **MSC.1/Circ.1590 Unified interpretation of paragraph 13.3.5 of the IGC Code (as amended by resolution MSC.370(93))**;
- **MSC.1/Circ.1591 Unified interpretations of the IGF Code.**

Item 9 - Implementation of IMO instruments

Updates of ECDIS

NCSR 3 had agreed with the International Hydrographic Organization (IHO)'s proposal for the extension of the period to keep the previous editions of IHO S-52 and S-64 valid from 13 September 2016 until 31 August 2017, to enable shipowners and operators to update existing systems in accordance with the guidance concerning the maintenance of ECDIS software contained in MSC.1/Circ.1503.

Intertanko raised the fact that some ECDIS manufacturers had been unable to provide the necessary updates within the requested time frame, i.e. before 1 September 2017. IHO confirmed that there are still a large number of ships using ECDIS that have not been upgraded to the current IHO Standards, and that an ECDIS using Presentation Library Edition 3.4 will continue to function and remain safe, despite possibly not being compliant with the latest ECDIS standards.

MSC 99 endorsed the issuance of **III.2/Circ.2 on Action to be taken by port States on the required updates of ECDIS.**

However, on the request of NCSR 5, it agreed that III.2/Circ.2 should be revoked as from 1 July 2018.

Item 10 - Ship design and construction

Amendments to SOLAS regulation II-1/8-1 on the availability of passenger ships' electrical power supply in cases of flooding from side raking damage

MSC 93 instructed SDC 2 to include the item of "double hull in way of main engine rooms" under the existing planned output 5.2.1.13 on amendments to SOLAS chapter II-1 subdivision and damage stability regulations.

MSC 96 endorsed the SDC 3's view that the double hull may not be the only solution and, therefore, other alternative solutions needed to be further considered

SDC 5 noted that the work on this output was initiated with a view to improving the availability of passenger ships' electrical power supply in case of an emergency, i.e. ensuring that escape routes and essential services remained available after a flooding incident, then this developed into a major discussion on side raking damages and the original purpose of the work might have been lost; and, in this context, suggested to request the Committee for clarification of the scope of this output and confirmation on whether the matter should be solved by applying electrical engineering solutions (e.g. distribution of emergency sources of power), rather than naval architectural solutions.

The question is whether this matter should be solved by applying electrical engineering solutions, rather than naval architectural solutions (i.e. double hull or other structural requirements that would impact not only the current safe-return-to-port concept, but also the probabilistic requirements in SOLAS chapter II-1).

MSC 99 endorsed the view that the systems required should be specified in terms of "systems that are required to remain operational" and has invited Member States and international organizations to review the systems that are required by SOLAS regulation II-1/42 to be supplied by the emergency source of power, and the methods of energy distribution for those systems, and consider whether there are any additional systems that may need to remain operational in a flooding damage casualty

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

MSC 96 had endorsed the outlines of the draft new chapter XV of SOLAS and the draft new code addressing the carriage of more than 12 industrial personnel on board vessels engaged on international voyages.

MSC 97 had adopted the Interim Recommendations on the safe carriage of more than 12 industrial personnel on board vessels engaged on international voyages (resolution MSC.418(97)) and endorsed the view that the proposed definitions of industrial personnel and offshore industrial activities should be the basis for the development of the mandatory instrument.

SDC 5 had invited Member States and international organizations objecting to the aforementioned basic principles to provide proposals for consideration at MSC 99.

MSC 99 agreed that:

- .1 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;
- .2 the application of the new SOLAS chapter XV and the new code should be limited to ships holding Cargo Ship Safety Certificates.

MSC 99 could not agree whether the nature of voyages should be specifically described in the proposed new SOLAS chapter XV or the scope of work should be redefined, with a view to developing a recommendatory code.

Some Member States view voyages from their coastal ports to offshore installations or maritime worksites under their jurisdiction as being domestic in nature. The implication being that either an offshore installation, or work location, is not a "port" or that it is not "outside such country" for the purposes of SOLAS regulation I/2(d).

To illustrate the potential problem, two voyages to the same offshore installation may be envisaged. One of these originating in a port of the coastal State enjoying jurisdiction and the other originating in another State. The first voyage could be declared a domestic voyage while the second an international voyage.

MSC 99 has instructed SDC 6 to continue the work under this output

Amendments to the 2011 ESP Code

SDC 5 agreed to the following roadmap :

- Preparation by Secretariat and IACS of a draft MSC resolution on amendments to the 2011 ESP Code to be submitted to MSC 99 for approval, with a view to subsequent adoption at MSC 100 and entry into force on 1 July 2020 ;
- Development in parallel of the consolidated version of the ESP Code, based on the draft amendments to be approved by MSC 99, with a view to preparing a draft Assembly resolution adopting the consolidated version of the ESP Code and revoking resolutions A.744(18) and A.1049(27), for consideration and finalization at SDC 6.

MSC 99 approved the draft amendments to the 2011 ESP Code, with a view to adoption at MSC 100.

Guidelines for wing-in-ground craft

MSC 99 has approved **MSC.1/Circ.1592 Guidelines for wing-in-ground craft.**

Item 12 - Navigation, communications and search and rescue

LRIT

MSC 99 approved an amendment to the Continuity of service plan for the LRIT system (MSC.1/Circ.1376/Rev.2), for dissemination of the revised circular by means of **MSC.1/Circ.1376/Rev.3 - Continuity of service plan for the LRIT system.**

Guidelines for the harmonized display of navigation information received via communications equipment

MSC 99 has approved **MSC.1/Circ.1593 - Interim guidelines for the harmonized display of navigation information received via communication equipment.**

Recognition of Iridium mobile satellite system for use in the GMDSS

MSC 99 has recognized by the maritime mobile satellite services provided by the Iridium Safety Voice, Short-Burst Data and enhanced group calling services, for use in the GMDSS. It has

adopted the corresponding resolution **Res.MSC.451(99) – statement of recognition of maritime mobile satellite services provided by Iridium satellite LLC.**

Harmonization of bridge design and display of information

MSC 99 has adopted **Res.MSC.452(99) – amendments to the revised performance standards for integrated navigation systems (INS) (Res.MSC.252(83))**, relating to the harmonization of bridge design and display of information.

E-navigation Strategy Implementation Plan (SIP)

MSC 99 has adopted **Res.MSC.1/Circ.1595 E-Navigation Strategy Implementation Plan – Update 1.**

Item 20 - Work programme

MSC 99 agreed to include in its post-biennial agenda the following outputs :

Development of amendments to the LSA Code to revise the lowering speed of survival craft and rescue boats for cargo ships

- the amendments to be developed should apply to all cargo ships to which SOLAS chapter III applied and to all launching appliances using falls and winches;
- the instrument to be amended was the LSA Code, paragraph 6.1.2.8;
- the amendments to be developed should enter into force on 1 January 2024, provided that they were adopted before 1 July 2022.

Amendments to SOLAS chapter III and chapter IV of the LSA Code to require the carriage of self-righting or canopied reversible liferafts for new ships

- the amendments to be developed consisted of new requirements for new passenger and cargo ships to be equipped with automatically self-righting or canopied reversible liferafts;
- the instruments to be amended were SOLAS regulations III/21, III/26 and III/31, and the LSA Code, chapter IV, paragraphs 4.2 and 4.3;
- the amendments to be developed should enter into force on 1 January 2024, provided that they were adopted before 1 July 2022.

Amendments to paragraph 4.4.7.6.17 of the LSA Code concerning single fall and hook systems with on-load release capability

- the instruments to be amended were SOLAS regulations III/21, III/26 and III/31, and the LSA Code, chapter IV, paragraphs 4.2 and 4.3;
- the amendments to be developed consisted of new requirements for new passenger and cargo ships to be equipped with automatically self-righting or canopied reversible liferafts;
- the amendments to be developed should enter into force on 1 January 2024, provided that they were adopted before 1 July 2022

Revision of the Code of safety for diving systems (resolution A.831(19)) and the Guidelines and specifications for hyperbaric evacuation systems (resolution A.692(17))

Revision of the Standardized life-saving appliance evaluation and test report forms (MSC/Circ.980 and addenda)

Item 21 - Any other business

List of certificates and documents required to be carried on board ships

With a view to avoiding the use of two different terms, i.e. "stability information" and "intact stability booklet", the list of certificates and documents required to be carried on board ships, 2017 (FAL.2/Circ.131- MEPC.1/Circ.873 - MSC.1/Circ.1586 - LEG.2/Circ.3) should be amended.

Consequential amendments to the Procedures for port State control, 2017 (resolution A.1119(30)), the BLU and IMSBC Codes, and the Guidelines for verification of damage stability requirements for tankers (MSC.1/Circ.1461) may need to be considered.
