NEWS BRIEF: MSC 106

The IMO Maritime Safety Committee (MSC) held its 106th session from November 2 to 11, 2022. This Brief provides an overview of the more significant issues progressed at this session.

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New SOLAS Chapter XV – Safety Measures for Ships Carrying Industrial Personnel

The Committee adopted Resolution MSC.521(106) establishing a new SOLAS Chapter XV to provide international regulation addressing the safe carriage of industrial personnel. This new chapter will apply to cargo ships and high-speed cargo craft of 500 gross tonnage and upward, carrying more than 12 industrial personnel. Chapter XV defines industrial personnel as persons transported or accommodated on board to perform offshore industrial activities (construction, maintenance, decommissioning, operation or servicing of offshore facilities related, but not limited, to exploration and exploitation of resources by the renewable or hydrocarbon energy sectors, aquaculture, ocean mining or similar activities) on board other ships and/or offshore facilities. Wherever the number of industrial personnel onboard appears as a parameter for the application of a regulation, it shall be taken to mean the aggregate number of industrial personnel, special personnel and passengers carried onboard (where the number of passengers shall not exceed 12 persons).

Scheduled for entry into force on 1 July 2024, this amendment to SOLAS will coincide with the adoption of the Code of Safety for Ships Carrying Industrial Personnel, or IP Code. The new SOLAS Chapter XV will be structured to clarify the application of the mandatory provisions in the IP Code to vessels normally certified under SOLAS and the High Speed Craft (HSC) Code.

For existing ships constructed before entry into force of SOLAS Chapter XV that comply with the Interim Recommendations on the Safe Carriage of More Than 12 Industrial Personnel on Vessels Engaged on International
Voyages (MSC.418(97), adopted 25 November 2016), a grace period will be given before selected regulations in the IP Code enter into force for these ships. This grace period is:

- Existing cargo ships that carry more than 12 industrial personnel must comply with selected requirements of the IP Code by the first intermediate or renewal survey after entry into force of these amendments.
- Existing high-speed cargo craft that carry more than 12 industrial personnel must comply with selected requirements of the IP Code by the third periodical or first renewal survey after entry into force of these amendments.

Existing cargo ships or high-speed cargo craft, irrespective of the date of construction, which have not been authorized to carry more than 12 industrial personnel prior to entry into force of SOLAS Chapter XV must fully comply with and be certified in accordance with the IP Code before carrying more than 12 industrial personnel.

**Code of Safety for Ships Carrying Industrial Personnel (IP Code)**

In association with the new SOLAS Chapter XV, the Committee also adopted Resolution MSC.527(106) containing the Code of Safety for Ships Carrying Industrial Personnel, or IP Code. In support of expanding maritime offshore and energy sectors, the IP Code is intended to supplement existing IMO instruments in order to provide international safety standards for the carriage of industrial personnel onboard cargo ships and high-speed cargo craft.

Using SOLAS and the 2000 HSC Code as a basis for regulatory compliance, the IP Code provides goals, functional requirements and additional regulations to facilitate the safe carriage and transfer of industrial personnel by addressing additional risks connected to such operations. The supplemental regulations of the IP Code address the following subjects:

1) Safe transfer of personnel  
2) Subdivision and stability  
3) Machinery installations  
4) Electrical installations  
5) Periodically unattended machinery spaces  
6) Fire safety  
7) Life-saving appliances  
8) Dangerous goods

Additionally, Administrations and Recognized Organizations will document compliance with the IP Code through the issuance of an Industrial Personnel Safety Certificate. This code will enter into force on 1 July 2024, in correlation with the new SOLAS Chapter XV.

Furthermore, the Committee previously agreed to continue work on the IP Code to address outstanding matters, which will begin at SDC 9 (Jan. 2023) and include the following:

1) clarifying the interaction between the IP and SPS Codes,  
2) incorporating provisions for passenger ships and,  
3) provisions for sleeping berths for high-speed craft carrying industrial personnel or carrying more than 60 persons.

**AMENDMENTS TO MANDATORY INSTRUMENTS**

**Amendments to SOLAS Chapter II-2 – Fuel Oil Safety Related to Flashpoint Requirements**

The Committee adopted Resolution MSC.520(106) containing amendments to SOLAS Chapter II-2/Regulation 4 which are intended to enhance the safety of ships related to the use of fuel oil by addressing concerns regarding the verification of the flashpoint of bunkered fuel oil. These amendments will require:
1) Documentation of the flashpoint of the actual fuel batch when bunkering. Under this regulation, ships shall be provided with a declaration signed and certified by the fuel oil supplier’s representative that the oil fuel supplied is in conformity with regulation SOLAS II-2/4.2.1 and the test method used for determining the flashpoint. The bunker delivery note that is to be provided prior to bunkering must contain the flashpoint specified in accordance with standards acceptable to the Organization or a statement that the flashpoint has been measured at or above 70°C;

2) Member States to report to the IMO any confirmed cases where oil fuel suppliers have failed to meet the flashpoint requirements of the Organization; and

3) Member States to take appropriate actions against oil fuel suppliers that have been found to deliver oil fuel that does not comply with flashpoint requirements of SOLAS regulation II-2/4.2.1.

These amendments will enter into force on 1 January 2026 and will affect both new and existing ships.

Amendments to 1978 SOLAS Protocol – Cargo Ship Safety Equipment Certificate
The Committee adopted Resolution MSC.522(106) containing amendments to the 1978 SOLAS Protocol that provide a replacement form of the Cargo Ship Safety Equipment Certificate. A minor revision was made to this form to acknowledge that requirements for radio installations used in life-saving appliances are now addressed within the form of the Cargo Ship Radio Certificate. This amendment will enter into force on 1 January 2026.

Amendments to IGC Code and IGF Code – Use of High Manganese Austenitic Steel
The Committee adopted Resolution MSC. 523(106) containing amendments to Table 6.3 of the IGC Code, and Resolution MSC.524(106) containing amendments to Table 7.3 of the IGF Code, to confirm the acceptability of high manganese austenitic steel under these Codes and to provide testing requirements for its use in cryogenic service. These amendments will enter into force on 1 January 2026.

In conjunction with these amendments to the IGC Code and IGF Code, the Committee also approved the following supporting circulars at MSC 105:
1) MSC.1/Circ.1648, Amendments to the Guidelines for the acceptance of alternative metallic materials for cryogenic service in ships carrying liquefied gases in bulk and ships using gases or other low-flashpoint fuels (MSC.1/Circ.1622); and
2) MSC.1/Circ.1599/Rev.2, Revised guidelines on the application of high manganese austenitic steel for cryogenic service (MSC.1/Circ.1599/Rev.1).

Amendments to the IBC Code – Doors in Watertight Bulkheads
The Committee adopted Resolution MSC.526(106) containing amendments to paragraph 2.9.2.1 of the IBC Code relating to watertight doors. The amendments are intended to address inconsistencies in several IMO instruments concerning doors in watertight bulkheads. The Convention requires that the final waterline after flooding shall not be above the lower edge of any opening through which progressive downflooding may take place, however in accordance with the amended text, this waterline may exceed the lower edge of:

1) remotely operated sliding watertight doors,
2) hinged watertight access doors of the quick-acting or single-action type with open/closed indication locally and at the navigation bridge that are normally closed at sea, and
3) hinged watertight doors that are permanently closed at sea.

These amendments will enter into force on 1 July 2024 following similar amendments to the Load Lines Convention and MARPOL Annex I.
Amendments to the 2011 ESP Code – Revised Tank Inspection Requirement for Bulk Carriers

Based on the findings of a recent marine safety investigation, the Committee adopted Resolution MSC.525(106) containing amendments to the 2011 ESP Code that are intended to align the requirements for inspections of void spaces bounding cargo holds with the existing requirements for inspections of water ballast tanks. For ships that have undergone a major conversion into a bulk carrier or ships that were originally designed to be a bulk carrier and have been subjected to a major conversion, additional amendments would require such tanks and other spaces to be subject to annual examinations if the tank structure has been subjected to major conversion and where a hard protective coating is found to be in “less than GOOD” condition. The proposed amendments will apply to bulk carriers of single-side skin construction and double-side skin construction.

Several additional clarifying amendments to the 2011 ESP Code were also finalized:
1) Clarification that the ESP Code does not apply to oil tankers carrying oil in independent tanks not part of the ship’s hull; and
2) Clarification of requirement for examination of ballast tanks at annual surveys.

These amendments will enter into force on 1 July 2024.

MARINE AUTONOMOUS SURFACE SHIPS (MASS)

Agreed Structure for the Draft MASS Code

Acknowledging that future work may lead to numerous changes, the Committee noted the progress made by correspondence groups and working groups leading to the following agreed structure for the draft MASS Code:

<table>
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<tr>
<th>Structure of the Draft MASS Code</th>
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<tr>
<td><strong>Part 1</strong> General</td>
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<tr>
<td>1 Introduction</td>
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<tr>
<td>2 Application</td>
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<tr>
<td>3 Code Structure and Relationship to Other IMO Instruments</td>
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<td>4 Terminology and Definitions</td>
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<td>5 Certificate and Survey</td>
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<td><strong>Part 2</strong> Main Principles for MASS and MASS Functions</td>
</tr>
<tr>
<td>1 Operational Context</td>
</tr>
<tr>
<td>2 Safe States for the Ship</td>
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<tr>
<td>3 Functions Required for MASS</td>
</tr>
<tr>
<td>4 Risk Assessment</td>
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<tr>
<td>5 System Design Principles</td>
</tr>
<tr>
<td><strong>Part 3</strong> Goals, Functional Requirements and Provisions</td>
</tr>
<tr>
<td>1 Navigation</td>
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<tr>
<td>2 Remote Operations</td>
</tr>
<tr>
<td>3 Communications</td>
</tr>
<tr>
<td>4 Subdivision, Stability and Watertight Integrity</td>
</tr>
<tr>
<td>5 Fire Protection / Safety</td>
</tr>
<tr>
<td>6 Life Saving Appliances and Equipment</td>
</tr>
<tr>
<td>7 Management of Safe Operations</td>
</tr>
<tr>
<td>8 Controlling the Operation of Ship</td>
</tr>
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<td>9 Security</td>
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<tr>
<td>10 Search and Rescue</td>
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<tr>
<td>11 Cargo Handling</td>
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<tr>
<td>12 Personnel Safety and Comfort</td>
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<tr>
<td>13 Towing and Mooring</td>
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<tr>
<td>14 Marine Engineering / Machinery</td>
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<tr>
<td>15 Electric and Electronic Engineering / Electric Installations</td>
</tr>
<tr>
<td>16 Maintenance and Repair</td>
</tr>
<tr>
<td>17 Emergency Response</td>
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<td>18 Care for Persons Onboard</td>
</tr>
<tr>
<td><strong>Part 4</strong> Specific Provisions for Remote Control of Ship Functions</td>
</tr>
<tr>
<td>1 Remote Operations and Control Centers</td>
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<tr>
<td><strong>Annex</strong> MASS Trials – MSC.1/Circ.1604 – Interim Guidelines for MASS Trials</td>
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</tbody>
</table>
In order to progress the work of developing goals and functional requirements of the above listed sections of the draft Code, volunteering Member States have divided up these sections and will develop draft text for review at a future session.

Updated Road Map for Marine Autonomous Surface Ships

Following up on the completion of the Regulatory Scoping Exercise (RSE) for MASS, the first meeting of the Joint Working Group on MASS (MASS-JWG) and discussions at this session, the Committee approved an updated Road Map for the development of a goal-based MASS Code. Work will progress over the next four sessions of the Committee, to adopt a non-mandatory goal-based MASS Code effective beginning 1 July 2024, and later adopt a mandatory MASS Code for entry into force by 1 January 2028. This code would initially be applicable to cargo ships only while in development, and eventually be applicable to passenger vessels once finalized and made mandatory.

The Road Map for a goal-based MASS Code has been updated to be further implemented through the work plan in the following MSC sessions:

<table>
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<th>MSC Session</th>
<th>Highlights of the Work Plan</th>
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<tbody>
<tr>
<td><strong>MSC 107</strong></td>
<td>- Continue the development of the non-mandatory MASS Code, including High priority items which include but are not limited to:</td>
</tr>
<tr>
<td>June 2023</td>
<td>- consideration, together with relevant documents, whether to amend the definition for MASS and degrees of autonomy (including the respective definition)</td>
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<td>- meaning of the terms master, crew or responsible person</td>
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<td>- remote control station/center</td>
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<td>- determination of the remote operator as a seafarer</td>
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<td>- develop provisions for a goal-based instrument</td>
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<td>- Continue consideration of the scope and framework of the mandatory and/or non-mandatory instrument to be developed for a goal-based MASS Code and other associated non-mandatory instruments</td>
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<td>- Identify changes to existing IMO instruments and make recommendation on how to address the changes to those instruments. The necessary amendments should focus on those classified as “High-priority” during the RSE:</td>
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<tr>
<td></td>
<td>- SOLAS chapters II-1, II-2, III, IV, V, VI, VII, IX, XI-1 and XI-2</td>
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<td>- COLREG</td>
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<td>- STCW Convention and Code</td>
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<td>- STCW-F Convention</td>
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<td>- 1966 LL Convention and 1988 Protocol thereto</td>
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<td>- 1979 SAR Convention</td>
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<td>- FSS Code</td>
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<td>- IMSBC Code</td>
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<td>- IMDG Code</td>
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<td>- TONNAGE 1969</td>
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<td>- IBC Code</td>
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<td>- IGC Code</td>
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<tr>
<td><strong>MSC 108</strong></td>
<td>- Continue the development of the non-mandatory MASS Code</td>
</tr>
<tr>
<td>1st half 2024</td>
<td>- Decision on the means to adopt the mandatory instrument (Code): implementation through one Convention or through several conventions. If needed, develop amendments to existing instruments necessary for the entry into force of the new instrument and need to be approved and/or adopted at the same time as the new Code</td>
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<td></td>
<td>- Finalize the non-mandatory MASS Code as annex to a draft MSC resolution</td>
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<tr>
<td><strong>MSC 109</strong></td>
<td>- Finalization and adoption of the new non-mandatory MASS Code</td>
</tr>
<tr>
<td>2nd half 2024</td>
<td>- Finalization of the draft mandatory MASS Code, based on the approved non-mandatory MASS Code</td>
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<td>- Finalization and approval of amendments to existing instruments necessary for the entry into force of the new instrument</td>
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<tr>
<td><strong>MSC 110</strong></td>
<td>- Adoption of a mandatory MASS Code and associated Convention(s) giving effect to the new MASS Code</td>
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<tr>
<td>1st half 2025</td>
<td>- Adoption and/or final approval of amendments to existing instruments necessary for the entry into force of the new instrument</td>
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<td></td>
<td>- Finalize the review of existing IMO instruments with a focus on those classified as “High-priority” during the RSE; and agree on remaining future work and the way forward.</td>
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SHIP SYSTEMS AND EQUIPMENT

New SOLAS Regulations for Onboard Lifting Appliances and Anchor Handling Winches (OLAW)

The Committee agreed to circulate amendments to SOLAS introducing new requirements for onboard lifting appliances and anchor handling winches, including a new SOLAS regulation II-1/3-13, which were approved in principle by MSC 102 and are pending formal adoption. These regulations apply to both new and existing ships.

The new regulations prescribe requirements for the design, construction, and installation of lifting appliances and anchor handling winches.

Lifting appliances are defined as all load-handling equipment onboard ships which are used to handle cargo, stores, hold hatch covers or moveable bulkheads, engine-room equipment, cargo hoses, tender boats and personnel (via cranes).

Anchor handling winches are defined as any winch for the purpose of deploying, recovering and repositioning anchors and mooring lines in subsea operations. This is not to be confused with a ship’s windlasses.

All lifting appliances and anchor handling winches, regardless of the installation date, and all loose gear utilized with any lifting appliances and anchor handling winches, are required to be operationally tested, thoroughly examined, inspected, operated and maintained based on the Guidelines referenced below. New installations of lifting appliances will be required to meet the requirements of a classification society, and new installations of anchor handling winches to be to the satisfaction of the Administration, taking into account guidelines for each which have been developed (detailed below). New definitions and terminologies have been added to SOLAS regulation II-1/2. The new regulation II-1/3-13 will not apply to lifting appliances used on MODUs and offshore construction ships (i.e. pipe/cable laying, offshore installation vessels), and will not apply to life-saving launching appliances complying with the LSA Code. Existing lifting appliances and anchor handling winches must undergo a test and thorough examination based on the below guidelines by the first renewal survey after entry into force of these amendments.

The draft amendments will be subject to adoption at MSC 107 (May 2023), with anticipated entry into force on 1 January 2026.

The committee approved the following two circulars to supplement the OLAW regulations:

**Guidelines for Lifting Appliances**

These guidelines include recommendations for design and testing, as well as guidance on operations and record keeping through a register of lifting appliances to be kept onboard. The Guidelines also address loose gear utilized with lifting appliances and recommend a proof test and thorough annual examination of this equipment. These Guidelines will be subject to final approval at MSC 107 (May 2023), alongside the related amendments to SOLAS Ch.II-1 discussed above.

**Guidelines for Anchor Handling Winches**

Similar to the separate guidelines drafted for lifting appliances, these guidelines will provide design, testing, and maintenance requirements for anchor handling winches and associated loose gear. These Guidelines will be subject to final approval at MSC 107 (May 2023), alongside the related amendments to SOLAS Ch.II-1 discussed above.

**Prohibition of Fire-Fighting Foams Containing PFOS Onboard Ships**

The Committee approved amendments to SOLAS Chapter II-2 and the HSC Codes (1994 and 2000) to introduce the prohibition of use or storage of fire-fighting foams containing PFOS (perfluorooctane sulfonic acid) for fire-fighting operations on ships.
on board ships. PFOS has been deemed hazardous to the marine environment and human beings, and this prohibition will apply to both fixed and portable systems. This prohibition is being introduced into SOLAS and the HSC Codes by the addition of a new section “Fire Extinguishing Media Restrictions” in each respective text, so that it will be easier to include future prohibitions or limitations of extinguishing media shown to be dangerous to people and the environment. This prohibition will be applicable to both new and existing ships, with a phase-in approach implemented for existing ships. These amendments will be subject to adoption at MSC 107 (May 2023) with an anticipated entry into force on 1 January 2026.

Amendments to LSA Code – Ventilation of Totally Enclosed Lifeboats

The Committee approved amendments to the LSA Code and Recommendation on testing of life-saving appliances MSC.81(70) to provide performance requirements for the ventilation of totally enclosed lifeboats. These amendments will require totally enclosed lifeboats to provide a means of ventilation operable from inside the lifeboat at a rate of not less than 5 m³/hour per person, for the number of persons which the lifeboat is permitted to accommodate and for a period of at least 24 hours. Where the means of ventilation is powered, the source of power shall not be the radio batteries, and if dependent upon the lifeboat engine, then sufficient fuel shall be provided. The openings for the ventilation are to be provided with a means of closing that is operable from inside the lifeboat and positioned so as to minimize the ingress of water.

After discussion, the Committee determined that the LSA Code amendments related to ventilation of partially enclosed lifeboats and life rafts would not be approved by the Committee at this time, but the item would remain on the agenda of the SSE sub-committee for further discussion of appropriate ventilation requirements for these survival craft types.

Corresponding amendments were approved for the Recommendations on testing of life-saving appliances (MSC.81(70)) requiring that testing of the capacity of the lifeboat’s fuel tank, needed to maneuver the lifeboat at a minimum speed of 6 knots for 4 hours, must also include the fuel consumed by the powered ventilation system. For totally enclosed lifeboats, a ventilation performance test is required with all entrances and hatches closed to confirm the ventilation rate noted above. Additionally, the lifeboat is to be incrementally rotated to an angle of heel of 180° and, upon release, the lifeboat is to return to the upright position without the assistance of its occupants.

These amendments will be subject to adoption at MSC 107 (May 2023) with an anticipated entry into force on 1 July 2026. Upon their acceptance, the draft new ventilation requirements in the LSA Code will be applied to totally enclosed lifeboats installed on or after 1 January 2029, so as to allow ample time for Administrations and manufacturers to implement the new ventilation requirements.

Amendments to the Interim Guidelines on Life-Saving Appliances and Arrangements for Ships Operating in Polar Waters

The Committee approved amendments to the Interim Guidelines on Life-Saving Appliances and Arrangements for Ships Operating in Polar Waters (MSC.1/Circ.1614), providing a methodology for estimating the maximum expected time of rescue in determining resources needed to support survival following abandoning ship under section 8.3 of part I-A of the Polar Code. This time duration will affect the type and amount of survival equipment and supplies to be provided. The Revised Interim Guidelines will be released as MSC.1/Circ.1614/Rev.1.

Revised Guidelines for Approval of Fixed Dry Chemical Powder Fire-Extinguishing Systems on Ships Carrying Liquefied Gases in Bulk

The Committee approved revisions to the Guidelines for the Approval of Fixed Dry Chemical Powder Fire-Extinguishing Systems for the Protection of Ships Carrying Liquefied Gases in Bulk (MSC.1/Circ.1315), which will apply to new installations. Under the current version of this circular, a representative system installation is to be
subjected to a full-scale fire test to the satisfaction of the Administration. The revised Guidelines will provide details for conducting the full-scale test in support of a system type approval. The Revised Guidelines will be released as MSC.1/Circ.1315/Rev.1.

Unified Interpretations of SOLAS Chapter II-2 / Regulation 9.7

The Committee approved new unified interpretations of SOLAS Chapter II-2. The following interpretations address arrangements of duct penetrations through fire-rated divisions:

1) **Regulation II-2/9.7.3.1.2** – The fire insulation required by regulation SOLAS II-2/9.7.3.1.2 should be provided only to the part of the duct and/or sleeve that is on the same side of the division being fire insulated and be extended for a minimum of 450 mm along the duct and/or sleeve.

2) **Regulation 9.7.3.2** – When a duct passing through a division is to be in accordance with SOLAS regulations II-2/9.3.2 and II-2/9.7.3.2, no clearance should be allowed between the duct and the division.

These interpretations will be released as MSC.1/Circ.1655.

NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE

Safety Measures for Non-SOLAS Ships Operating in Polar Waters

The Committee approved draft amendments to SOLAS Chapter XIV for the implementation of safety measures under the Polar Code, for non-SOLAS ships operating in polar waters. These amendments will add a new draft Regulation 3-1 within SOLAS Chapter XIV, to identify new requirements in the Polar Code which will be applicable to the non-SOLAS ships under consideration. Three specific ship profiles were targeted for application of these additional safety measures:

1) fishing vessels of 24 meters in overall length and above;
2) pleasure yachts of 300 gross tonnage and above not engaged in trade; and
3) cargo ships of 300 gross tonnage and above but below 500 gross tonnage.

The Committee also approved corresponding amendments to the Polar Code Part I-A to specify additional safety measures for non-SOLAS ships operating in polar waters. Amendments were made to Chapter 9 (Safety of Navigation) and Chapter 11 (Voyage Planning) to insert new Chapters 9-1 and 11-1 that specially address the above listed ship profiles. The new Chapter 9-1 addresses the functionality of navigational equipment in low temperatures and latitudes over 80 degrees, and the new Chapter 11-1 addresses the considerations that the master shall make when planning a route through polar waters.

For ships flying the flag of an Arctic state, these regulations will apply when the voyage is beyond the outer limit of the territorial sea of that Arctic state. Additionally, because of the lack of SOLAS certification framework applicable to these types of ships, the Committee agreed that the certificate showing compliance with the newly introduced requirements of the Polar Code part I-A, chapters 9-1 and 11-1 should be left to discretion of the Flag Administration.

The above noted draft amendments will be adopted at MSC 107 (May 2023), and the anticipated date of entry into force for these amendments is 1 January 2026 for new vessels. These requirements will apply to existing vessels one year after entry into force.
Mandatory Carriage of Electronic Inclinometers on Container Ships and Bulk Carriers

The Committee approved draft amendments to SOLAS Chapter V requiring the carriage of an electronic inclinometer onboard newly constructed container ships and bulk carriers of 3,000 gross tonnage and upwards. Provision of this device will allow the Voyage Data Recorder (VDR) to record roll motion information for the purpose of incident investigation. It will additionally provide critical stability information to the navigational officer onboard each ship, which may help to prevent shifting or loss of cargo in heavy weather.

This new regulation will not apply to cargo ships occasionally carrying cargoes in bulk, and general cargo ships carrying containers on deck. It was also determined that electronic or mechanical back-up systems for inclinometers would not be needed, as they were not considered as critical equipment for the safety of navigation, but rather as operational equipment.

These draft amendments will be adopted at MSC 107 (May 2023) and are anticipated to enter into force on 1 January 2026.

Revised Performance Standards for Electronic Chart Display and Information Systems (ECDIS)

The Committee adopted Resolution MSC.530(106) containing revisions to ECDIS performance standards given in resolution MSC.232(82), introducing updates to acknowledge new technologies and standards. Revisions were made to include terminology recognizing Electronic Navigational Data Services (ENDS) as a special-purpose database of nautical information, and to incorporate updated references to the latest standards of the International Hydrographic Organization (IHO) for electronic navigation data.

Regarding the application of ECDIS performance standards:
1) equipment installed on or after 1 January 2029 must conform to these revised performance standards;
2) equipment installed on or after 1 January 2026 but before 1 January 2029 must conform to either these revised performance standards or the standards given in resolution MSC.232(82);
3) equipment installed on or after 1 January 2009 but before 1 January 2026 must conform to the performance standards given in resolution MSC 232(82); and
4) equipment installed on or after 1 January 1996 but before 1 January 2009 must conform to the performance standards given in resolution A.817(19), as amended by resolutions MSC.64(67) and MSC.86(70).

Revision of ECDIS Guidance for Good Practice

The Committee approved revisions to MSC.1/Circ.1503/Rev.1, ECDIS – Guidance for Good Practice, which address the need to clarify procedures and documentation for onboard ECDIS updates that are needed to demonstrate ongoing compliance. In these revisions, a new section specifically addressing onboard ECDIS updates has been added with guidance on the revision or reissuance of Type Approval certificates following an onboard ECDIS update. This guidance applies to cases where updates are initiated by the manufacturer to improve functions, as well as cases where updates are required to maintain compatibility with the latest standards of the International Hydrographic Organization (IHO).

The revisions to this guidance also instruct ECDIS manufacturers to notify Flag Administrations, Recognized Organizations, and ECDIS users of any anomalies in hardware or software that may negatively affect maritime safety, including advisement of appropriate mitigating measures. An added Appendix 4 will provide examples of onboard ECDIS updates and describes the documentation which should be provided in order to decide if recertification is necessary. This guidance will be released as MSC.1/Circ.1503/Rev.2.
Updates to the LRIT System

The Committee adopted or approved revisions to the following standards and guidance related to the LRIT system and LRIT equipment:

<table>
<thead>
<tr>
<th>Revised LRIT Standards</th>
<th>To be issued as</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revised Performance Standards and Functional Requirements for the Long-Range Identification and Tracking of Ships</td>
<td>MSC.263(84)/Rev.1</td>
</tr>
<tr>
<td>Long-Range Identification and Tracking System - Technical documentation (Part I)</td>
<td>MSC.1/Circ.1259/Rev.9</td>
</tr>
<tr>
<td>Guidance on the Survey and Certification of Compliance of Ships with the Requirement to Transmit LRIT Information</td>
<td>MSC.1/Circ.1307/Rev.1</td>
</tr>
<tr>
<td>Continuity of Service Plan for the LRIT System</td>
<td>MSC.1/Circ.1376/Rev.5</td>
</tr>
</tbody>
</table>

These updates were based on the report of the LRIT Operational Governance Body, in which the organization discussed matters related to the role of the International LRIT Data Exchange (IDE) Business Continuity Facility maintained by the European Maritime Safety Agency, connectivity issues with the IDE disaster recovery site maintained by the U.S. Coast Guard, validation of PKI (Public Key Infrastructure) certificates and removal of the functionality from the LRIT system for remote reprogramming of the LRIT shipborne equipment.

Revised Circulars Related to SOLAS Amendments for Modernization of the GMDSS

As a result of the modernization of the Global Maritime Distress and Safety System (GMDSS), and numerous amendments made to SOLAS Chapters II-1, III, IV and V related to GMDSS, the Committee has approved or endorsed revisions of several supporting circulars:

<table>
<thead>
<tr>
<th>Revised Circulars Related to GMDSS Modernization</th>
<th>To be issued as</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmonization of GMDSS Requirements for Radio Installations on board SOLAS Ships</td>
<td>COMSAR/Circ.32/Rev.1</td>
</tr>
<tr>
<td>• Revokes circulars COMSAR/Circ.16, COMSAR/Circ.17, COM/Circ.110, COM/Circ.110/Corr.1 and COM/Circ.117, from 1 January 2024</td>
<td></td>
</tr>
<tr>
<td>GMDSS Coastal Station Operator’s Certificate (CSOC) Model Course</td>
<td>COMSAR/Circ.33/Rev.1</td>
</tr>
<tr>
<td>GMDSS Operating Guidance for Ships in Distress Situations</td>
<td>MSC.1/Circ.1656</td>
</tr>
<tr>
<td>Procedure for Responding to DSC Distress Alerts by Ships</td>
<td>MSC.1/Circ.1657</td>
</tr>
<tr>
<td>Guidance on Distress Alerts</td>
<td>MSC.1/Circ.1658</td>
</tr>
<tr>
<td>Guidance on Alerting of Search and Rescue Authorities</td>
<td>MSC/Circ.892/Rev.1</td>
</tr>
</tbody>
</table>

The above listed circulars are expected to become effective on 1 January 2024, in alignment with other amended regulations related to GMDSS modernization.

Revised NAVTEX Manual

The Committee approved a new revision to circular MSC.1/Circ.1403, providing the 2023 Edition of the NAVTEX Manual. NAVTEX is an international automated direct-printing service for the promulgation of maritime safety information, navigational and meteorological information, and other urgent safety-related messages to ships. In this edition, several clarifications were made to the list of definitions, as well as the inclusion of the term Enhanced Group Call, and the insertion of subsequent references to replace the use of SafetyNET where required. The most
significant amendment is the addition of a new section on withdrawing NAVTEX stations and/or services, clearly detailing the process and timelines that should be observed. Other minor editorial revisions were also made. The revised circular is expected to become effective on 1 January 2023, and to be published as circular MSC.1/Circ.1403/Rev.2.

**Guidance for the Dissemination of Search and Rescue Related Information Through the International Enhanced Group Call Service (EGC)**

The Committee approved an MSC circular providing guidance to search and rescue (SAR) authorities needing to disseminate SAR-related information to ships that receive information through the international Enhanced Call Group (EGC) service. The circular provides guidance on how SAR authorities can obtain authorization through the IMO to broadcast SAR-related information through the international EGC service, and also advises recognized mobile satellite service providers to facilitate training on the use of their international EGC services. This guidance is expected to be published as circular MSC.1/Circ.1659.

**Guidance on the Training on and Operation of Emergency Personal Radio Devices in Multiple Casualty Situations**

The Committee approved an MSC circular addressing ships carrying large numbers of crew or passengers in the event of a multiple casualty evacuation, to improve the effective use of emergency personal radio devices (EPRD). This circular provides guidance to crew on characteristics of EPRDs, and guidance to be given to passengers regarding the appropriate use of EPRDs so that the activation of many EPRDs in the same area does not prevent search and rescue services from locating signals effectively. This guidance is recommended to be included and addressed in the safety management system pursuant to the ISM Code of ships that could require a multiple casualty evacuation. This guidance is expected to be published as circular MSC.1/Circ.1660.

**Revision of Guidelines on Places of Refuge for Ships in Need of Assistance**

The Committee approved a draft revision of the Guidelines on Places of Refuge for Ships in Need of Assistance, Resolution A.949(23), to support faster decision-making toward aiding ships in need of refuge. Seeking to improve upon guidance adopted in 2003, the revised guidelines incorporate lessons learned and an improved organization structure to provide clarity in the roles of the ship’s master, the salvor, and the Coastal State as parties involved with ships in need of assistance:

- Expected actions of the ship’s master and the managing company after a maritime incident have been revised in greater detail to acknowledge and support compliance with the ISM Code.
- For situations in which the master has relinquished command of a vessel to a salvor, the revised guidelines detail additional responsibilities of the salvor in communicating vessel condition and salvage plans to the relevant Coastal Authority.
- For Coastal States or a designated Competent Authority, revised guidance is provided on the assessment of received alerts, regional/international cooperation in providing safe refuge for distressed ships, and management of information for media / key interest groups.
- The role of the Classification Society is acknowledged in the revised guidelines, for support in risk assessment to preserve hull integrity and stability, and preventing environmental pollution.

The revised guidelines will be subject to concurrent approval by the MEPC 79 (Dec. 2022) and LEG 110 (Mar. 2023) committee meetings before being presented to the Assembly 33 (Nov. 2023) for adoption of the revised resolution.
HUMAN ELEMENT, TRAINING AND WATCHKEEPING

Amendments to the STCW Convention and Code – Electronic Certificates of Seafarers

The Committee approved draft amendments to regulations I/1 and I/2 of the STCW Convention, incorporating a new definition for "original form of any certificate required by the Convention" to recognize that seafarers’ certificates may be issued in paper or electronic form, and to broadly support the trend of digitalization in marine operations.

In relation to the above noted STCW Convention amendments, the Committee also approved draft amendments to section A-I/2 of the STCW Code, to clarify the application of existing terms and terminologies found within the Code to certificates and endorsements produced in electronic form. The amendments clarify that terms such as “front,” “back” and “overleaf” will not be applicable to electronic certificates. Similarly, an official seal as well as a photograph and signature of the seafarer are not necessary for certificates and endorsements in electronic form.

The above noted amendments to the STCW Convention and STCW Code are anticipated to be adopted at MSC 107 (May 2023). In support of these amendments, an MSC circular providing detailed guidelines for the use of electronic certificates of seafarers will also be presented to MSC 107 for approval.

Updated Guidelines on Development, Review and Validation of Model Courses

The Committee approved the draft amendments to the Guidelines for the Development, Review and Validation of Model Courses, providing new appendices 4 (Action Verb Taxonomy for Model Courses) and 5 (Guidance on Learning Outcomes). These guidelines are intended to standardize the process by which model training courses are developed, forming a basis upon which Administrations will approve courses for seafarer training and thus playing a significant role in the implementation of IMO regulations. The revised guidelines will be issued as MSC-MEPC.2/Circ.15/Rev.2, subject to the concurrent decision of MEPC 79.

OTHER DEVELOPMENTS

Unsafe Mixed Migration by Sea – Cooperation on Rescue of Persons in Distress at Sea

In response to recent discussions on the responsibilities of involved parties about the disembarkation of persons rescued at sea, the Committee adopted Resolution MSC.528(106), Recommended Cooperation to Ensure the Safety of Life at Sea and the Safe Disembarkation of Survivors. The SOLAS Convention, as well as the International Convention on Maritime Search and Rescue (SAR Convention), establish an obligation for masters to render assistance to any persons in distress at sea regardless of the status or circumstances of such persons in need of aid. The resolution adopted by the Committee at this session is intended to acknowledge incidents where ships were not given access to disembark survivors taken on board in a distress situation as soon as reasonably practicable and with minimum further deviation from the ships’ intended voyage, and also acknowledge the risk and stress faced by seafarers needfully engaging in rescue activities. Member States (in their roles as flag States, coastal States, or port States) are reminded that search and rescue activities are not concluded until survivors have been disembarked to a place of safety, and are called upon to promote cooperation between coastal and flag States to fulfill the obligations of the SOLAS and SAR Conventions.
Search and Rescue Services in the Context of Armed Conflicts

In acknowledgment of recent ongoing armed conflict in and near the Black Sea and reports of illegal seizure of search and rescue vessels, the Committee adopted Resolution MSC.519(106), *Member States’ Obligations in Connection with Search and Rescue Services Under the SOLAS and SAR Conventions in the Context of Armed Conflicts*. This resolution is intended to urge Member States to refrain during the armed conflict from:

1) preventing SAR units and facilities available to render assistance to persons in distress from performing their functions and hampering the effective and efficient coordination of SAR operations by rescue coordination centers (RCC) and rescue sub-centers (RSC) within their search and rescue regions;

2) hindering SAR services by the seizure of SAR units and facilities and their crews, RCCs and RSCs; and

3) detaining crewmembers of SAR units and facilities and RCC/RSC personnel.
CONTACT INFORMATION

NORTH AMERICA REGION
1701 City Plaza Dr.
Spring, Texas 77389, USA
Tel: +1-281-877-6000
Email: ABS-Amer@eagle.org

SOUTH AMERICA REGION
Rua Acre, n° 15 - 11º floor, Centro
Rio de Janeiro 20081-000, Brazil
Tel: +55 21 2276-3535
Email: ABSRio@eagle.org

EUROPE REGION
111 Old Broad Street
London EC2N 1AP, UK
Tel: +44-20-7247-3255
Email: ABS-Eur@eagle.org

AFRICA AND MIDDLE EAST REGION
Al Joud Center, 1st floor, Suite # 111
Sheikh Zayed Road
P.O. Box 24860, Dubai, UAE
Tel: +971 4 330 6000
Email: ABS-Dubai@eagle.org

GREATER CHINA REGION
World Trade Tower, 29F Room 2906,
500 Guangdong Road, Huangpu District,
Shanghai, China 200000
Tel: +86 21 23270888
Email: ABSShanghai@eagle.org

NORTH PACIFIC REGION
11th Floor, Kyobo Life Insurance Bldg.
7, Chungjang-daero, Jung-Gu
Busan 48939, Republic of Korea
Tel: +82 51 460 4197
Email: ABSSouthPacific@eagle.org

SOUTH PACIFIC REGION
438 Alexandra Road
#06-00 Alexandra Point, Singapore 119958
Tel: +65 6276 8700
Email: ABS-Pac@eagle.org

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