



NEWS BRIEF

MSC 109





NEWS BRIEF: MSC 109

The IMO Maritime Safety Committee (MSC) held its 109th session from December 2 to 6, 2024. This Brief provides an overview of the significant issues progressed at this session.

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- Developing Safety Regulatory Framework Supporting GHG Reduction
- Use of Cargoes Identified as Toxic Products (e.g., Ammonia) as Fuel
- Draft Amendments to SOLAS Convention in relation to the application of the IGF Code
- Development of the Draft MASS Code
- Goal-Based Ship Construction Standards (GBS)

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DEVELOPMENTS TO ENHANCE THE SAFETY OF SHIPS' FUEL

Development of a Safety Regulatory Framework Supporting GHG Reduction from Ships Using New Technologies and Alternative Fuels

The Committee established the Working Group (WG) on Development of a Safety Regulatory Framework to Support the Reduction of GHG Emissions from Ships Using New Technologies and Alternative Fuels and invited the Group to submit its work in two parts.

Part 1

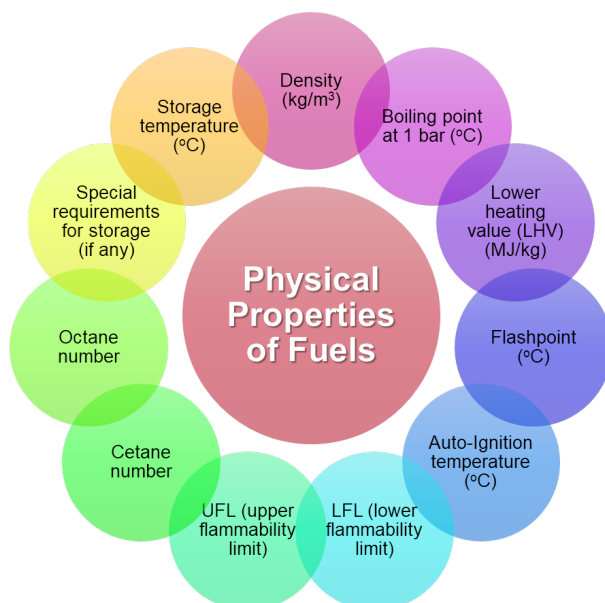
The WG Report part 1 was completed in this session, concentrating on updating the list of alternative fuels and new technologies that can help reduce GHG emissions from ships. Furthermore, progress was made on the assessment of each identified fuel and new technology while also continuing the ongoing identification and documentation of safety obstacles and gaps in current IMO instruments that may hinder the adoption of alternative fuels or new technologies. Draft amendments for SOLAS regulations II-1/2.29, II-1/56, and II-1/57 were prepared.

Updated List of Alternative Fuels and New Technologies

At this stage, the focus regarding the list of alternative fuels and new technologies is to gather as much information as possible for each entry. This effort will support the development and implementation of a future roadmap, which will facilitate amendments to existing instruments or the creation of new ones, as well as the development of mandatory requirements and/or guidelines. It was noted that certain alternative fuels had "no input" for specific fields in the assessment, including:

- Hydrothermal liquefaction (HTL) fuels
- Pyrolysis fuel
- Hydrotreated vegetable oil (HVO)
- Fischer-Tropsch (FT) diesel
- Dimethyl ether (DME)
- Ethane

In this context, proposals were received specifically for fuels that had "no input" to modify the proposed format for characterizing the physical properties of fuels. As a result, a table of physical properties was added for each fuel in the list.





Swappable Traction Lithium-Ion Battery Containers

Gaps in the regulations of IMO instruments in connection to the safe use of swappable traction lithium-ion battery containers and proposed recommendations to fill those gaps were discussed. The Committee included a new category for “swappable traction lithium-ion battery containers” to the list of new technologies and agreed that the new gaps identified should be forwarded to the Correspondence Group (CG) on GHG Safety for consideration.

Part 2

The WG report part 2 will be submitted to MSC 110 (June 2025) and will include the criteria for the assignment of work to sub-committees and a work plan with timelines, task and priorities on GHG Safety-related matters.

Marine Biofuels (FAME Type)

The Committee noted information on projects testing the application of marine biofuel (FAME type) oil on low-speed engine test beds and on board ships. The Committee noted the recommendation that, based on existing research, attention should be given to the variations in calorific value and kinematic viscosity of marine biofuels (FAME type) at different blending ratios and their effects on engines and systems. The changes in calorific value; and viscosity of marine biofuel oil should be incorporated into the crew training manual.

Draft Amendments to SOLAS Convention in Relation to the Application of the IGF Code

MSC 109 considered a proposal regarding potential amendments to clarify how the IGF Code applies to gas fuels. Currently, the IGF Code is applicable to low-flashpoint fuels as defined in SOLAS regulation II-1/2.29. Since ammonia does not present flammable vapor during the phase change from liquid to gas, it appears to be outside the scope of the IGF Code. However, it was confirmed that the draft interim guidelines for ships using ammonia as fuel will apply to anhydrous ammonia, whether in its liquefied or gaseous forms.

Recognizing the urgent need to provide certainty for the industry investing in alternative fuels, the Committee approved an MSC Resolution to amend Chapter II-1 of the SOLAS convention in relation to the application of the IGF Code. The draft amendments include changes to regulations 2 (definitions), 56 (application), and 57 (requirements for ships using low-flashpoint fuels) and aim to clarify the application of the IGF Code to gas fuels.

To this end, the definition of "Gaseous fuel" was revised to refer to any fluid used as fuel that has a vapor pressure exceeding 0.28 MPa absolute at a temperature of 37.8°C or is completely gaseous at 20°C under a standard pressure of 101.3 kPa. Additionally, revisions on the application of Part G of SOLAS on ships using low-flashpoint fuels were made to apply to "Ships using gaseous fuels or low-flashpoint fuels".

Application: The Committee approved these amendments during this session, with a view to adoption at MSC 110 in June 2025. It was also agreed that the four-year amendment cycle outlined in MSC.1/Circ.1481 should be relaxed to allow for the entry into force in 2027.

Assessment of Capacity-Building Implications on Draft Amendments to the IGC and IGF Codes

The Committee agreed that the draft amendments to the IGC and IGF Codes may have implications for capacity-building and that there could be a need for technical cooperation or assistance. Therefore the Committee invited the Technical Cooperation Committee to take note of this assessment and encouraged Member States requiring capacity-building assistance related to these amendments to reach out to the Organization accordingly.

Use of Cargoes Identified as Toxic Products (e.g., Ammonia) as Fuel

Considering the urgent need to reduce GHG emissions from shipping, the Committee adopted *Amendments to the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code)*, which are relevant to the use of cargoes identified as toxic products that may be used as fuel. Specifically, If acceptable to the Administration, cargoes identified as toxic products in column "f" which are required to be carried in type 2G/2PG ships in column "c" in the table of chapter 19 may be used as fuel, provided that the same level of safety as natural gas (methane) is ensured by the relevant provisions of the IGC Code and taking into account the guidelines developed by the Organization.

In addition, the Committee approved the MSC circular on the *Voluntary Early Implementation of the Amendments to Chapter 16 of the IGC Code, Adopted by Resolution*. Voluntary early implementation should be communicated by a Contracting Government to the Organization for dissemination through GISIS.

Application: The entry-into-force date of these amendments is July 1, 2026, and apply to ships subject to the IGC Code, the keels of which are laid, or which are at a similar stage of construction, on or after July 1, 2016 in accordance with paragraph 1.1.2.1 of the IGC Code.



Interim Guidelines for the Safe Use of Ammonia as Fuel

The Committee approved *Interim Guidelines for the safety of ships using ammonia as fuel*. Due to the toxicity of ammonia, the guidelines present several key concepts that should be highlighted:

- **Toxic area and space classification**
There is a clear distinction between “toxic areas” and “toxic spaces”, with the former located on open-deck and the latter within ship structural boundaries, whereas toxic area boundaries must be set based on prescriptive distances in parallel with gas dispersion analysis to demonstrate the ammonia concentrations.
- **Safe Haven**
The guidelines introduce the requirement for safe haven, as a space designed for the purpose of minimizing the risk of exposure to ammonia during the release of ammonia, with a cumulative total capacity to accommodate all persons on board.

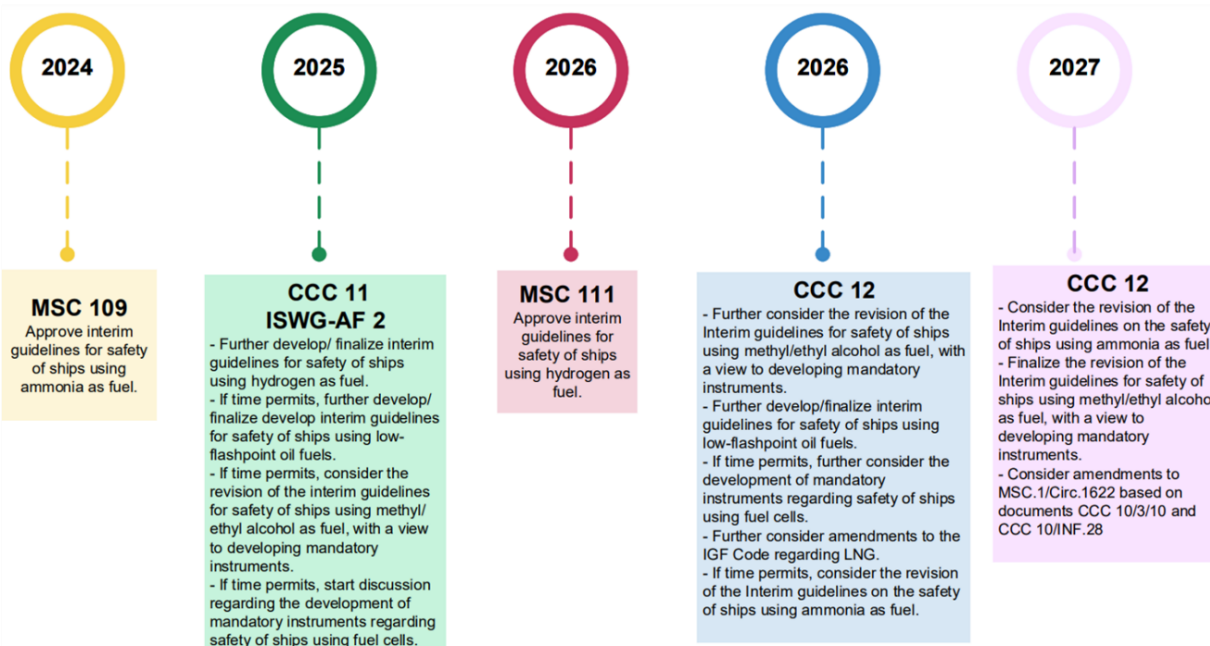
■ Ammonia Release Mitigation System (ARMS)

In normal operation, there should be no direct release of ammonia. However, in situations where the release of ammonia is foreseeable and controllable, but necessary, there should be provisions for ammonia treatment systems to minimize the amount of released ammonia. The discharge criteria for the ammonia release mitigation system should be set below 110 ppm.

Updated Work Plan for the Development of New Alternative Fuels

The Committee endorsed the updated work plan for the development of new alternative fuels.

UPDATED WORK PLAN FOR THE DEVELOPMENT OF NEW ALTERNATIVE FUELS UNDER THE IGF CODE





AMENDMENTS TO MANDATORY INSTRUMENTS

A. Amendments to the IGF Code

The Committee adopted *Amendments to the International Code of Safety for Ships Using Gases or other Low-Flashpoint Fuels* (IGF Code). These amendments address various aspects, including general pipe design, suction wells in fuel tanks, fire protection, safety functions of the gas supply system, hazardous area zones, and ventilation requirements.

Suction Wells Installed in Fuel Tanks

For ships with suction wells installed in fuel tanks, the bottom of the suction well may protrude into the vertical extent of the minimum distance specified, provided that such wells are as small as practicable and the protrusion below the inner bottom plating does not exceed 25 percent of the depth of the double bottom or 350 mm, whichever is less.

Material and Pipe Design

Pressure relief valves discharging liquid or gas from the piping system shall discharge into the fuel tanks whenever the tank MARVS pressure is lower than the setting of the pressure relief valves and shall be designed to ensure that the required discharge capacity is met. Alternatively, they may discharge to the vent mast, if means are provided to detect and dispose of any liquid that may flow into the vent system.

Fuel Supply to Consumers - Safety Functions of Gas Supply System

Fuel tank inlets from pressure relief valve discharge lines, protecting the piping system, shall be provided with non-return valves in lieu of valves that are automatically operated when the safety system is activated. Safe means for tank isolation during maintenance shall be available without affecting the proper operation of pressure relief valves.

Fire safety Fire Protection - Boundary Facing Fuel Tanks

- For ships constructed on or after January 1, 2028, any such boundary facing the fuel tank on the open deck which is separated by a minimum distance, as determined to the satisfaction of the Administration through a heat analysis to provide protection equivalent to an A-60 class division, shall be considered acceptable, and intermediate structures providing heat protection to the above spaces may also be considered acceptable. Notwithstanding the above-mentioned requirements:
 - For oil tankers and chemical tankers, the A-60 insulation required by SOLAS regulation II-2/9.2.4.2.5 shall be considered to meet the above requirements, provided that the fuel tank is located in the cargo area forward of accommodation spaces, service spaces, control stations, escape routes, and machinery spaces.
 - For ships constructed on or after January 1, 2028, where no source of gas release from the fuel containment system is considered possible, e.g. a type C tank in which tank connections are in a tank connection space, A-60 class shielding is not required.
- Fuel tanks shall be segregated from cargo in accordance with the requirements of the International Maritime Dangerous Goods (IMDG) Code where fuel tanks are regarded as bulk packaging. For the purposes of stowage and segregation requirements of the IMDG Code, a fuel tank on the open deck shall be considered as a class 2.1 package.

Hazardous Area Zones

- Hazardous area zone 1: Areas on open deck or semi-enclosed spaces on open deck above and in the vicinity of a fuel tank vent mast outlet within a vertical cylinder of unlimited height and 6 m radius centered upon the center of the outlet and within a hemisphere of 6 m radius below the outlet. Where it



is not possible to maintain the above distances due to the size and layout of the ship, a reduced zone can be accepted based on a dispersion analysis, using 50 percent LEL criteria.

- Hazardous area zone 2: In lieu of 12.5.3.1, for ships constructed on or after January 1, 2028, this zone includes spaces 4 m beyond the cylinder and 4 m beyond the hemisphere defined in 12.5.2.4.

Ventilation

Where the ventilation ducts serving non-hazardous spaces pass through a hazardous space, the ducts shall be gastight and have overpressure relative to that hazardous space; and where the ventilation ducts serving hazardous spaces pass through less hazardous spaces or non-hazardous spaces, the ducts shall be gastight and have underpressure relative to the less hazardous or non-hazardous spaces. Ventilation pipes serving hazardous spaces that pass through less hazardous spaces or non-hazardous spaces are acceptable without the need for underpressure, provided that they are fully welded and designed in accordance with chapter 7.

Application: The amendments will enter into force on January 1, 2028, and will apply to ships using gases or other low-flashpoint fuels constructed on or after January 1, 2028, meaning for which the building contract is placed on or after January 1, 2028; or in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after July 1, 2028; or the delivery of which is on or after January 1, 2032.

B. Amendments to the LSA Code

Ventilation Requirements for Partially Enclosed Lifeboats and Liferafts

The Committee noted the discussions regarding the compelling need for ventilation requirements for partially enclosed lifeboats and liferafts. It was recognized that additional information is required to clearly demonstrate the necessity for developing such ventilation requirements for these types of survival crafts. Therefore, the Committee invited submissions for the next session of the Sub-Committee on Ship Systems and Equipment to support this need. This matter will be revisited at SSE 11 (Spring 2025) with the understanding that the item would be considered completed if no submissions justifying the compelling need were received at the next session.

Design and Prototype Test Requirements for the Equipment Used in the Simulated Launching of Free-Fall Lifeboats

The Committee noted the ongoing work to develop design and prototype test requirements for the arrangements used in operational testing of free-fall lifeboat release systems, specifically without launching the lifeboat. The goal was to incorporate requirements for the design of "the arrangements" into the LSA Code, considering both the static weight of the lifeboat and the shock load that would be experienced in the operational testing of the free-fall lifeboat release system without launching the lifeboat (a simulated launch).

While the initial scope was limited to the LSA Code, there would be a need for amendments to other related instruments, especially due to the following arguments.

- The prototype and production test requirements for the testing arrangement under consideration should be developed and reflected in resolution MSC.81(70);
- The procedures for the inspection, maintenance, thorough examination, operational testing, overhaul and repair of the testing arrangement should be developed and reflected in resolution MSC.402(96); and
- Other related instruments, such as MSC.1/Circ.1529, *Guidelines on safety during abandon ship drills using lifeboats* (MSC.1/Circ.1578) and MSC.1/Circ.1630/Rev.2, might need to be revised based on the draft amendments to paragraph 4.7.6.4 of the LSA Code and subsequent draft amendments to resolution MSC.81(70).

To support this effort, the Committee endorsed the expansion of the scope of the 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" to cover amendments to other related instruments in addition to the LSA Code, to be considered by SSE 11, with a view to finalization of all relevant amendments, for approval by MSC 110 and adoption by MSC 111, as appropriate.

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 proposed amendments to SOLAS Chapter III and chapter IV of the LSA Code regarding liferafts for new ships involve the requirement to equip all passenger and cargo ships with automatically self-righting or canopied reversible liferafts, except for liferafts with a capacity of no more than six persons. The issue with these proposed amendments is the need to clarify the special technical requirements for various types of liferafts, such as rigid automatically self-righting liferafts, canopied reversible liferafts, inflatable automatically self-righting liferafts, and canopied reversible liferafts in the LSA Code. The Committee noted the discussion on automatically self-righting or canopied reversible liferafts and that a consensus could not be reached on the scope of the draft amendments to SOLAS chapter III and chapter IV of the LSA Code and, therefore, invited relevant submissions to SSE 11 (Spring 2025).

C. Amendments to the HSC Codes

Draft Amendments to the 1994 and 2000 HSC Codes on Lifejacket Carriage Requirements

The Committee approved amendments to paragraph 8.3.5 and annex 1 of the 1994 and 2000 HSC Codes on lifejacket carriage requirements, taking into account the associated check/monitoring sheet and the record format. These amendments aim to harmonize the lifejacket carriage requirements in the Codes with those requirements in SOLAS Chapter III. The approved amendments are expected to be adopted by MSC 110 (2025) and will apply to all craft, no later than the date of the first renewal survey on or after January 1, 2028 to which SOLAS Chapter X applies.



For passenger craft on voyages less than 24 h, a number of infant lifejackets equal to at least 2.5% of the number of passengers on board shall be provided.



For passenger craft on voyages 24 h or greater, infant lifejackets shall be provided for each infant on board.



If the adult lifejackets provided are not designed to fit persons weighing up to 140 kg and with a chest girth of up to 1,750 mm, a sufficient number of suitable accessories shall be available on board to allow them to be secured to such persons.

D. Amendments to the FTP Code

New Fire Protection Systems and Materials

The Committee discussed the revision of the 2010 FTP Code to allow for new fire protection systems and materials and invited SSE 11 to coordinate the work under this output along with that of the post-biennial item on "Review and update SOLAS regulation II-2/9 on containment of fire to incorporate existing guidance and clarify requirements". The discussions on this matter will continue in the next session SSE 11 (March 2025).

GOAL-BASED NEW SHIP CONSTRUCTION STANDARDS

Goal-Based Ship Construction Standards (GBS) - IACS Recommendation 34 on the Standard Wave Data

IACS Rec.34 aims to define standard wave data and long-term sea state statistics based on North Atlantic environmental conditions, to be used for classification of ships. IACS Rec. 34 was revised in 2000 and adopted in 2001 (Rev. 1) to define a standard scatter diagram for the purposes of carrying out direct calculations in view of defining the rule wave loads. Rev.1 was based on old Global Wave Statistics – Visual observations BMT Atlas (1986).

In order to address an observation (IACS/2015/FR-18/OB/02) from the IMO GBS audit of CSR in 2015 to provide sufficient justification that the wave data used in the rules properly represent North Atlantic conditions, IACS has employed modern techniques in revising Rec.34 based on hindcast data, which are validated by buoys and altimetry satellite measurements, providing more accurate and objective information rather than visual observations. As a result, Rec. 34 Rev.2 was developed, aiming to provide a more substantive and objective basis for the purpose of classification rule development. Following the revision of Rec. 34, a GBS audit outside the three-year cycle carried out intended to address the initial observation and to reassess compliance of IACS Rec.34/Rev.2 with international goal-based ship construction standards for bulk carriers and oil tankers (resolution MSC.287(87)), taking into account the Revised GBS Verification Guidelines (resolution MSC.454(100)).



During the discussion relevant comments noted by the Committee, as follows:

1. In comparison with the 2001 and 2022 versions, the latest version recognized that some waves were getting bigger, however the rate of occurrence of ships encountering large waves had reduced with the justification that ships would apply weather routing;
2. Without any compelling evidence for the inclusion of the southern parts of the North Atlantic in the new wave data set, areas 24 and 25 should be removed;
3. Limiting the wave height hindcasts to the AIS tracks of predominantly weather-routed ships that were actively avoiding storms;
4. The lack of consideration for future wave height increases resulting from global warming having a negative impact on wave height;
5. Relative comparison between Rec.34/Rev.2 and other sources revealed Rec.34/Rev.2 as less onerous, and the fact that IACS Rec.34/Rev.2 remained published without precautionary notes;
6. Rec.34/Rev.2 should not be applied to IACS CSR until a full impact assessment, including impacts on scantlings, had been completed;
7. IACS and the industry should collaborate for a mutually agreeable understanding and resolution of the matter, as appropriate;
8. Consideration of the worst-case sea conditions alone was considered unreasonable without careful technical assessment and probabilistic analysis which could lead to increasing ship weight that would also increase GHG emissions without achieving the expected safety benefit;
9. CSR needs to be developed based on clear, sound and scientific logic in a manner that the ship construction standards ensured safety of lives at sea; and

The Committee considered the final report of the GBS Audit and subsequently:

1. Endorsed the recommendations of the GBS Audit Team that the observation stemming from the GBS initial verification of CSR rules, back in 2015 be considered as addressed in the context of addressing the;
2. Endorsed the recommendations of the GBS Audit Team that:
 - a. A revision of IACS Rec.34/Rev.2, containing more detailed information is recommended;

- b. The following audit on IACS Rec.34 revision be carried out in conjunction with that of the consequential rule changes in CSR
- c. The following audit should encompass all the rules substantially affected by IACS Rec.34/Rev.2 and then used to develop the CSR, giving particular relevance to consequence assessment and hull scantling benchmarking.
3. Invited IACS to take the necessary actions for a "following" audit; and to provide further updates to the Committee on activities taken to gather more data, with a view to conducting a further GBS audit of IACS Recommendation 34 "Standard Wave Data" at the earliest opportunity, given the major implications on the design, construction and maintenance of ships, and the safety of crews, passengers and cargoes;
4. Requested the auditors to take into account the documents submitted raising issues/concerns with Rec.34/Rev.2 in future GBS Maintenance Audits when assessing the revised CSR;
5. Encouraged IACS not to implement the newly developed CSR until a GBS "following" audit in line with the recommendations of the GBS audit had been completed and the Committee, at a future session, had reviewed and acted on the recommendations from the auditors; and
6. Requested the Secretariat to make the necessary arrangements for the "following" audit as soon as IACS had completed its work on the matter and requested an audit.

Additionally, the Committee:

1. Encouraged IACS to work together with other stakeholders, including Member States and the industry, with a view to ensuring an inclusive involvement of all parties concerned, or affected, by the rule development process.
2. Recalled that an essential element supporting the robustness of the GBS framework was very much dependent on the availability of GBS auditors and invited interested Member States to nominate experts through the dedicated GISIS module.

FORMAL SAFETY ASSESSMENT

Draft Revised Guidelines for Formal Safety Assessment (FSA) for Use in the IMO Rule-Making Process

The purpose of the Formal Safety Assessment is to offer a structured and systematic methodology aimed at enhancing maritime safety, protection of the environment and property by using risk analysis and cost-benefit assessment. It can be used in the IMO decision-making process as a tool to assist with the evaluation of new regulations or in making comparisons between existing and proposed improved regulations with a view to achieving a balance between the various technical and operational issues and its costs.

The last session of the Experts Group on Formal Safety Assessment was held in 2023 to review the outcome of the CARGOSAFE Formal Safety Assessment (FSA) study addressing containership fires. The Group identified some potential improvements to the *Revised guidelines for Formal Safety Assessment (FSA) for use in the IMO rule-making process* (MSC-MEPC.2/Circ.12/Rev.2) (Revised FSA Guidelines) and recognized that such improvements should be considered at the Committee level. In May 2024, MSC 108 incorporated all the suggested concrete modifications to the Revised FSA Guidelines for facilitating their consideration, with the understanding that further modifications may be proposed.

To this session, the Committee approved amendments to the Revised FSA Guidelines emanating from the recommendations made by the FSA Experts Groups and the SSE Sub-Committee that had considered various FSA studies, for circulation of the amended Revised FSA Guidelines, as MSC-MEPC.2/Circ.12/Rev.3, subject to concurrent approval by Marine Environment Protection Committee MEPC 83 (April 2025).

MARINE AUTONOMOUS SURFACE SHIPS (MASS)

Further Development of the Draft MASS Code

The ever-increasing use of automation in the operation of ships, along with the anticipated increase in the use of remote control and autonomous operation of key functions, will require a different approach. In facing these challenges it is recognized that some aspects associated with MASS are not adequately or fully addressed in SOLAS or other IMO instruments and that additional guidance is required on the design and operation of MASS to ensure a level of safety that is expected of a conventionally operated ship. To this scope, the MASS Code will address the functions needed for safe, secure, and environmentally sound operations of MASS insofar as they are not adequately or fully addressed in other applied IMO instruments, while ensuring that required safety levels are maintained when implementing remote controlled or autonomous operation of key functions.

The Committee approved in general the report of the Working Group on the Development of a Goal-Based Instrument for Maritime Autonomous Surface Ships (MASS) and noted the progress made on the development of the non-mandatory International Code of Safety for MASS (MASS Code).

During this session, the Committee noted that the Working Group finalized chapters 7 (Risk Assessment), 12 (Connectivity) and 18 (Remote Operations) of the draft MASS Code, and had discussions on chapters 8 (Operational Context), 23 (Search and Rescue), and chapter 28 (Emergency response).

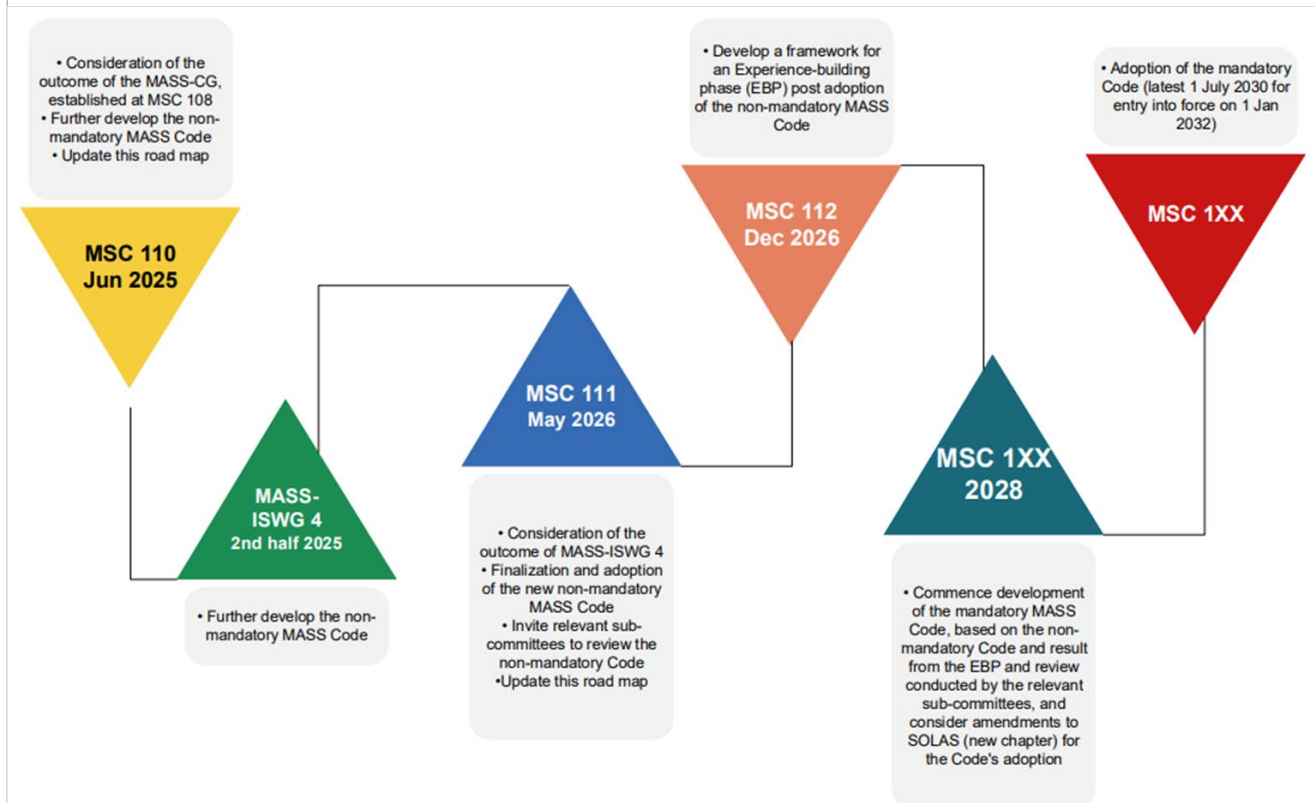
In Chapter 8 (Operational Context), it was agreed, in principle, on the merit of developing a framework for the Concept of Operations (ConOps). This framework aims to help users better understand the concept, although it was acknowledged that further work is necessary. After discussions, the Committee invited interested delegations to submit proposals for consideration at the next session of MSC 110 in June 2025, with the view of finalizing the framework for the development of ConOps.

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Additionally, the Committee agreed to the revised roadmap for developing a goal-based code for MASS, with a view to further revision when necessary. It was agreed to retain MSC 111 (2026) as the target for finalization and adoption of MASS Code. An invitation for the relevant Sub-Committees to review the non-mandatory Code would take place after finalization and adoption, prioritizing this review to benefit users during the experience-building.

REVISED ROAD MAP FOR DEVELOPING A GOAL-BASED CODE FOR MARITIME AUTONOMOUS SURFACE SHIPS (MASS)



MSC 109 re-established the Intersessional Working Group on Maritime Autonomous Surface Ships, to take place between MSC 110 and MSC 111 (i.e., the second half of 2025).

MARITIME SECURITY

Next Steps to Enhance Maritime Cybersecurity

The Committee noted the urgent need for improved cybersecurity measures in the maritime industry to safeguard commercial ships and port facility operations against rising cyber threats and risks. The importance of developing further develop cybersecurity standards for ships and port facilities was agreed and will be discussed in detail at the next MSC 110 session in 2025. Furthermore, the Committee invited Member States and international organizations to submit proposals for enhancing maritime cybersecurity and extended the target completion of the output to 2026.

NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE

Inconsistent Implementation of SOLAS Regulations IV/10 and IV/15 and COMSAR.1/Circ.32/Rev.2

Amendments to SOLAS Chapter IV (Radiocommunications), resulting from the modernization of the GMDSS, were adopted by resolution MSC.496(105) and entered into force on January 1, 2024. The Committee recalled that the Modernization Plan of the GMDSS did not propose any new carriage or retrofit requirements for ships.

At this session, the Committee considered a document that highlighted the issue of inconsistent implementation of SOLAS regulations IV/10 and IV/15 and COMSAR.1/Circ.32/Rev.2, which relate to an MF radio installation for sea area A3. After consideration and recognizing general support for clarifying the carriage requirements in sea area A3 to ensure uniform application of SOLAS Chapter IV, the Committee agreed to issue a revision of COMSAR.1/Circ.32/Rev.2, amending footnote no. 6 of the table beneath paragraph 2.3 to read:

"6 A single MF/HF radio installation may be accepted both as a primary MF radio installation and as a duplicated MF/HF radio installation, as provided in this circular."

As a result, the Committee approved COMSAR.1/Circ.32/Rev.3 on the Harmonization of GMDSS requirements for radio installations on board SOLAS ships, superseding COMSAR.1/Circ.32/Rev.2 with immediate effect.

Routeing Measures and Ship Reporting Systems

The Committee adopted the amended traffic separation schemes and associated measures *In the approaches to Hook of Holland and at North Hinder*, to be implemented from 00:00 hours UTC on July 1, 2025, and approved a COLREG.2 Circular on *Traffic separation schemes and associated measures* containing the above-mentioned amended measure, revising and superseding COLREG.2/Circ.67

Also, the Committee adopted the revised recommendation on navigation for containerships in traffic separation schemes *Off Vlieland, Terschelling-German Bight, Off Friesland and German Bight western approach*, and the areas to be avoided around oil rigs off the Brazilian coast – Santos Basin, to be implemented from 00:00 hours UTC on July 1, 2025, and approved a circular on *Routeing measures other than traffic separation schemes* containing the above-mentioned measures.

Draft Assembly Resolution on Charges for Distress, Urgency and Safety Communications Through Recognized Mobile Satellite Services in the GMDSS

MSC 109 approved the draft Assembly resolution on *Charges for distress, urgency and safety communications through recognized mobile satellite services in the GMDSS*, revising and revoking resolution A.707(17), and invited A 34 to adopt it.

Amendments to the IAMSAR Manual

The Committee approved *Amendments to the IAMSAR Manual*, taking into account ICAO's concurrence with the inclusion of the proposed amendments to the Manual in its 2025 Edition. In doing so, the Committee noted that, in accordance with the *Procedures for amending and updating the IAMSAR Manual* (resolution A.894(21), annex), the application date of the draft amendments to the Manual had been set as of January 1, 2026.



List of Documents and Publications by a Maritime or Joint Rescue Coordination Centre

The Committee endorsed the approval of SAR.7/Circ.16 on list of documents and publications which should be held by a maritime or joint rescue coordination center, revising and superseding SAR.7/Circ.15.

Performance Standards for a Digital Navigational Data System (NAVDAT)

The Committee adopted resolutions on *performance standards for the reception of maritime safety information and search and rescue related information by MF and HF digital navigational data (NAVDAT) system* and MSC.509(105)/Rev.1 on *provision of radio services for the Global Maritime Distress and Safety System (GMDSS)*. In doing so, the Committee confirmed that carriage of NAVDAT equipment was not mandated under the 1974 SOLAS Convention and that the provision of radio services for the GMDSS was determined by SOLAS Contracting Governments. The Committee also noted that NAVDAT implementation would continue to be considered by the NCSR Sub-Committee.

Performance Standards for Pilot Transfer Arrangements

The Committee approved the draft amendments to SOLAS regulation V/23 and the appendix (Certificates), along with the associated draft MSC resolution on performance standards for pilot transfer arrangements. Additionally, the consequential draft amendments to the 1994 and 2000 HSC Codes were also approved, with the aim of adoption by MSC 110 in 2025. Furthermore, the Committee agreed that, after the adoption of these amendments, A 34 should be invited to revoke resolutions A.1045(27) and A.1108(29) at a date to be determined during MSC 110, considering the implementation dates of the draft amendments to SOLAS regulation V/23.

The Committee also approved, in principle, the consequential draft amendments to the 2008 SPS Code and the Code of Safety for Fishermen and Fishing Vessels, 2005.

In addition, MSC 109 agreed to the draft MSC circular on *Required pilot transfer arrangements for pilots and other personnel*, which revises MSC.1/Circ.1428, with an effective date to be determined at MSC 110. It was also discussed the draft MSC circular on the Voluntary early implementation of the amendments to SOLAS regulation V/23 regarding pilot transfer arrangements.

Lastly, the Committee endorsed the associated check/monitoring sheet for the process of amending the 1974 SOLAS Convention and related mandatory instruments and the assessment of capacity-building implications of the draft amendments to SOLAS regulation V/23 and associated instruments.

Revision of the Performance Standards for a Universal AIS

Having noted the need of the identification of measures to improve the security and integrity aspects of AIS, the Committee adopted resolution on *Performance standards for a universal shipborne automatic identification system (AIS)*, revising annex 3 to resolution MSC.74(69), and applicable to new installations.

Difficulties of the radar SART

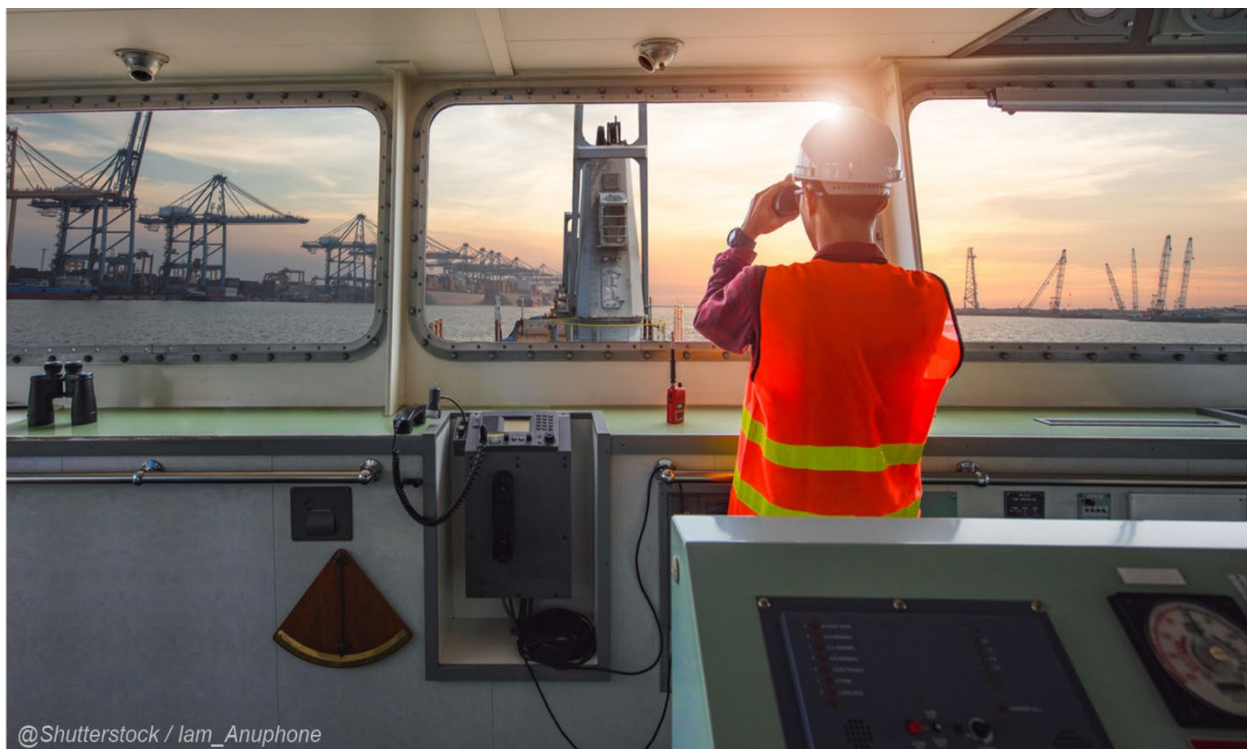
The Committee considered a proposal highlighting the ineffectiveness of the radar search and rescue transponder (SART) in locating survivors and proposing measures, including a draft circular to provide guidance on the difficulties and risks involved in the setting of radar displays to correctly visualize radar SART signals in order to mitigate the problem until a permanent solution was developed.

Recognizing the need to raise awareness of the above-mentioned potential difficulties with the setting of radar displays, the Committee agreed, as a short-term solution, to the circulation of the relevant information Safety of Navigation (SN) circular. Following consideration, the Committee approved a circular on *Difficulties and risks involved in the setting of radar displays to correctly visualize radar SAR transponder (SART) signals* and requested the Secretariat to prepare the cover page of the circular.

Other circulars

The Committee approved:

1. MSC.1/Circ.1460/Rev.5 on *Guidance on the Validity of Radiocommunications Equipment Installed and Used on Ships*, Revising and Superseding MSC.1/Circ.1460/Rev.4;
2. SN.1/Circ.297/Rev.1 on *IALA Maritime Buoyage System*, revising and superseding SN.1/Circ.297; and
3. SN.1/Circ.296/Rev.1 on *IALA Risk Management Toolbox for aids to navigation and vessel traffic services*, revising and superseding SN.1/Circ.296.





UNIFIED INTERPRETATION OF PROVISIONS OF IMO SAFETY, SECURITY AND ENVIRONMENT-RELATED CONVENTIONS

Unified Interpretations on implementation of SOLAS Regulations III/20.8.4 and 20.11 to Inflated Rescue Boats

Discussions during a previous session (MSC 105) as to whether SOLAS Regulation III/20.11 and resolution MSC.402(96) were applicable to inflated rescue boats led to the development of a UI that clarifies that SOLAS Regulation III/20.11 and resolution MSC.402(96) should also be applicable to inflated rescue boats. At this session, the Committee approved a circular on *Unified interpretations of SOLAS regulations III/20.8.4 and 20.11, and resolution MSC.402(96)*, on the applicability of SOLAS regulation III/20.11 and resolution MSC.402(96) to inflated rescue boats.

Unified Interpretations of SOLAS Regulation II-2/4.5.6.1 on Cargo/Vapour Piping and Related Gas-Freeing Piping/Ducts

The Committee approved *Unified interpretations of SOLAS regulation II-2/4.5.6.1, and paragraphs 3.1.2, 3.1.4 and 3.5.3 of the IBC Code*, on cargo/vapor piping and related gas-freeing piping/ducts on tankers, with the effective date of January 1, 2026. The unified interpretation indicates that all cargo piping (including cargo tank venting piping, relief valve discharge piping, cargo tank purging and gas-freeing piping/ducts), except those serving for inerting gas supply and for bow or stern loading and unloading arrangement, should be arranged within the cargo areas, as defined in SOLAS Regulation II-2/3.6 and in paragraph 1.3.6 of the IBC Code.

Unified Interpretations on Consistent Application of SOLAS Regulations II-2/11.4.1, II-2/4.5.3.2.2 and 11.6.3.2

The Committee approved *Unified interpretations of SOLAS chapter II-2*, on consistent application of SOLAS regulation II-2/11.4.1 on the crown of a machinery space of category A, as well as SOLAS regulations II-2/4.5.3.2.2 and 11.6.3.2 on the secondary means of venting cargo tanks.

SOLAS Regulation II-2/11.4.1 – Machinery Spaces of Category A, Crowns, and Casings

Since the definition of "crown" is not currently part of SOLAS (e.g., under SOLAS Regulation II-2/3) and as such can lead to a possible misunderstanding when applying the relevant requirements, this UI clarifies that the crown of a machinery space of category A should be understood to mean the underside of the deck and the uppermost horizontal part of the main space of the machinery space. If the upper side bulkheads are sloping, the sloping parts of the bulkheads should be included in the crown.

SOLAS Regulations II-2/4.5.3.2.2 and 11.6.3.2 – Cargo Areas of Tankers; Protection of Cargo Tank Structure Against Pressure or Vacuum in Tankers

The UI clarifies that for ships that apply pressure sensors in each tank as an alternative to having the secondary means of venting as per SOLAS Regulation II-2/11.6.3.2, the setting of the over-pressure alarm should be above the pressure setting of the P/V valve and the setting of the under-pressure alarm should be below the vacuum setting of the P/V valve. An exception should be permitted for ships that carry different types of cargo and use P/V valves with different settings, one setting for each type of cargo. The settings may be adjusted to account for the different types of cargo.

Unified Interpretation of SOLAS Regulation II-1/26 on Single Essential Propulsion Components

The Committee approved *Unified interpretation of SOLAS chapter II-1* on SOLAS regulation II-1/26 concerning single essential propulsion components, with the effective date of January 1, 2026. The UI clarifies the need to consider potential failures in electric machines. It emphasizes that ships must be able to maintain or restore propulsion capacity in the event of winding insulation or excitation failures. It also states that relying solely on single electric propulsion motors is not sufficient; a separate unit is necessary to ensure navigable speed. Furthermore, propulsion systems featuring two independent rotors on a single shaft can be considered reliable, provided that each rotor can be controlled individually.

Prohibiting The Use of Fire-Fighting Foams Containing Fluorinated Substances, in addition to PFOS

The Committee noted that the report from the FP Correspondence Group regarding the revision of MSC.1/Circ.1312 indicated that a ban on fluorinated substances in foam concentrates is not necessary at this time, and that the matter should be revisited in case of expansion of the ban to cover other types of fluor-based foam concentrates. The matter will be discussed further at SSE 11 (2025).

Fire risks of ships carrying new energy vehicles

The Committee noted that SSE 10 had agreed on a road map for an effective consideration of the matter, together with a goal-based approach. A two-step approach was deemed necessary for addressing regulatory measures for existing and new ships, with an urgent focus on operational issues for the existing fleet before considering regulatory modifications. Current SOLAS chapter II-2, FSS, and 2010 FTP Codes should be reviewed. While the IMDG Code already addresses the risks of electric batteries, the work should concentrate on fire-fighting issues.

It is noted that the risks of battery electric vehicles (BEVs) differ from conventional vehicles but are not necessarily higher. Identifying fire causes and regulatory gaps is essential before drafting amendments, and fixed fire-fighting systems must effectively address both BEVs and conventional vehicles. A standard activation time for fire systems was considered too prescriptive, with emphasis on detection and verification systems instead. Prioritizing emergency response procedures, crew training, and coordination with shore fire-fighting assets is crucial. A comprehensive three-year plan targeting completion by 2027 should be developed to guide regulatory development.

Amendments Emanating from Assumed Weight in Self-Righting Tests and Retro-Reflective Materials

The Committee adopted amendments to paragraph 6.14.1.1 of the *Revised recommendation on testing of life-saving appliances* (resolution MSC.81(70)), concerning assumed weight used to represent each person in self-righting tests for totally enclosed lifeboats. When the lifeboat with its engine is loaded in the normal position with properly secured weights, it represents the fully equipped lifeboat with a full complement of persons on board. The weight used to represent each person, assumed to have an average mass of 75 kg for a lifeboat intended for a passenger ship or 82.5 kg for a lifeboat intended for a cargo ship, should be secured at each seat location and have its center of gravity approximately 300 mm above the seat pan so as to have the same effect on stability as when the lifeboat is loaded with the number of persons for which it is to be approved.

In addition, the Committee approved the following circulars with the effective date of 15 August 2025, incorporating consequential amendments:



1. MSC.1/Circ.1628/Rev.3 on *Revised standardized life-saving appliance evaluation and test report forms (personal life-saving appliances)*;
2. MSC.1/Circ.1630/Rev.3 on *Revised standardized life-saving appliance evaluation and test report forms (survival craft)*;
3. MSC.1/Circ.1631/Rev.1 on *Revised standardized life-saving appliance evaluation and test report forms (rescue boats)*; and
4. MSC.1/Circ.1632/Rev.1 on *Revised standardized life-saving appliance evaluation and test report forms (launching and embarkation appliances)*.

Revised Standards for the Design, Testing and Locating of Devices to Prevent the Passage of Flame into Cargo Tanks in Tankers

The Committee approved MSC.1/Circ.677/Rev.1 on *Revised standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers*, effective December 4, 2026.

OTHER DEVELOPMENTS

Recommendations to National Administrations to Prevent Collisions with Fishing Vessels

The Committee approved *Recommendations to national Administrations to prevent collisions with fishing vessels*, which was developed taking into account the findings of the analysis of investigation reports and the survey circulated through III.3/Circ.12 on *Casualty investigation questionnaire on fishing vessel collisions (2018-2022)*.



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