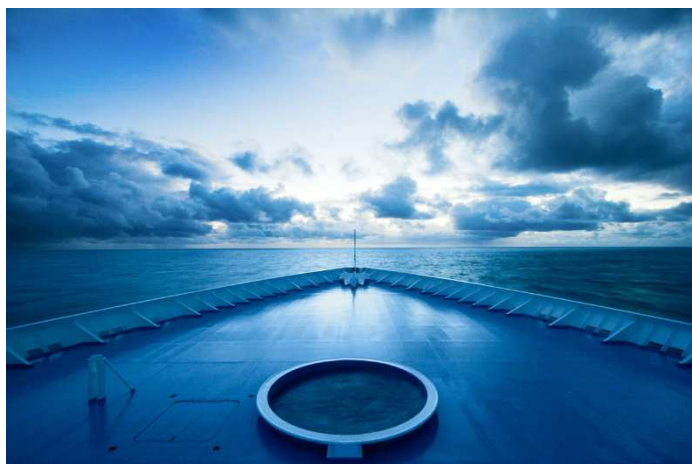


IMO MARITIME SAFETY COMMITTEE (MSC 105)

Relevant for ship owners, managers, designers, manufacturers, and flag states.

April 2022

The 105th session of the IMO's Maritime Safety Committee (MSC) was held remotely from 20 to 29 April. A wide range of topics was on the agenda, including the safety of ships carrying industrial personnel, the safety of ships relating to the use of fuel oil, and the consideration of a regulatory framework for maritime autonomous surface ships. Requirements reflecting modern systems for maritime distress and safety communication were adopted and interim guidelines for the safety of ships using fuel cell power installations were approved. The development of interim guidelines for ships using ammonia as fuel were initiated.



Meeting highlights

- Adoption of amendments to modernize the requirements of the Global Maritime Distress and Safety System (GMDSS)
- Approval of draft SOLAS amendments to enhance the safety of ships relating to the use of oil fuel
- Approval of the draft new SOLAS Chapter XV and the draft new mandatory code for the carriage of industrial personnel (IP Code)
- Approval of interim guidelines for the safety of ships using fuel cell power installations
- Agreement on a roadmap for the development of a non-mandatory code for maritime autonomous surface ships

Blue safe maritime corridor in the Black Sea and Sea of Azov

Following up on the extraordinary IMO Council meeting in March 2022, MSC 105 adopted a resolution on “Actions to facilitate the urgent evacuation of seafarers from the war zone area in and around the Black Sea and the Sea of Azov as a result of the Russian Federation aggression against Ukraine”.

The resolution calls for humanitarian support to seafarers stranded in Ukrainian ports and their safe and expeditious evacuation.

Amendments to mandatory instruments

Modernization of the global maritime distress and safety system

MSC 105 adopted amendments to SOLAS, its Protocol of 1988 and the related IMO instruments to modernize the requirements of the Global Maritime Distress and Safety System (GMDSS).

The modernization implies more generic requirements, independent of specific service providers, and the removal of carriage requirements for systems that have become obsolete since the GMDSS was established in 1988. The equipment requirements for sea areas A1 to A4 have been amended.

The provisions for communication equipment have been moved from SOLAS Chapter III on life-saving appliances to Chapter IV on radio communications. The amendments to SOLAS Chapters III and IV will not require the reissuance of existing SOLAS certificates.

Consequential amendments to the 1994 and 2000 High-Speed Craft (HSC) Codes and to the non-mandatory Special Purpose Ships (SPS) Code and Mobile Offshore Drilling Units (MODU) Code were adopted accordingly.

The amendments will enter into force on 1 January 2024.

Consequential draft amendments to the 1978 SOLAS Protocol to update the Forms of Safety Equipment Certificate for Cargo Ships were approved and are subject to adoption by MSC 106.

The International Maritime Solid Bulk Cargoes (IMSBC) Code MSC 105 adopted amendment 06-21 of the IMSBC Code. The amendment includes a change of the definition of group A cargoes, reclassification of ammonium nitrate-based fertilizer (now non-hazardous), and new cargo schedules for clam shell and leach residue containing lead and granular triple superphosphate.

The amendments will enter into force on 1 December 2023, with voluntary early implementation from 1 January 2023.

The International Maritime Dangerous Goods (IMDG) Code MSC 105 adopted amendment 41-22 of the IMDG Code, following a regular review of the code.

The amendments will enter into force on 1 January 2024, with voluntary early implementation from 1 January 2023.

Domestic ferry safety

The global number of accidents and casualties related to domestic ferries has remained high for decades. While domestic operations are outside the scope of the IMO's responsibilities, MSC 105 adopted recommendatory model regulations on domestic ferry safety.

Safety of ships relating to the use of fuel oil

Low-flashpoint fuels are attractive from an environmental perspective due to their clean burning characteristics and low sulphur content.

MSC 105 approved draft amendments to SOLAS Chapter II-2, Regulations 3 and 4, requiring ships carrying oil fuel to be provided with a bunker delivery note, prior to bunkering, stating that the flashpoint of the actual fuel batch is in conformity with SOLAS. The amendments further request contracting governments to inform the IMO of cases where oil fuel suppliers have delivered fuels that do not meet the SOLAS flashpoint requirements, and to take appropriate action against oil fuel suppliers accordingly.

MSC 105 also considered guidelines for sampling procedures to address situations where indicative test results suggest that the oil fuel supplied may not comply with the flashpoint requirement. A correspondence group will advance such sampling guidelines and consider harmonization with the existing regime for control of fuel oil suppliers under MARPOL until MSC 107 (June 2022).

The draft SOLAS amendments will apply to new and existing ships and are expected to enter into force on 1 January 2026, subject to adoption by MSC 106 (November 2022). Voluntary early implementation may be considered at the adoption stage.

Goal-based new ship construction standards

Goal-based new ship construction standards (GBS) for bulk carriers and oil tankers are conceptually IMO's rules for classification rules. Under the GBS standards, IMO auditors use guidelines to verify construction rules for bulk carriers and oil tankers of classification societies acting as Recognized Organizations (ROs).

MSC 105 agreed on dates and procedures to facilitate the verification audit process. It was agreed to harmonize the three-year maintenance audit cycle between all ROs, commencing in April 2022.

Maritime autonomous surface ships (MASS)

The prospect of autonomous ships operating internationally with little or no human intervention has revealed the need for a regulatory framework for such ships, including their interaction and co-existence with conventional manned ships. The current regulatory framework generally assumes manning and human intervention.

MSC 105 agreed to develop a non-mandatory, goal-based code for MASS, potentially entering into force on 1 January 2028 as a mandatory code through SOLAS and other IMO instruments, as relevant, upon experience with its application.

A roadmap for the development work was approved. The roadmap includes the consideration of key principles, purpose and objectives for the new goal-based code, the consideration of its scope and structure, and the consideration of a common understanding of MASS terminology. The roadmap also includes the consideration of how common challenges that have been identified across several IMO instruments could be addressed, for example the need to clarify the role and responsibility of the "master" for circumstances where shore

personnel might control the ship, or the functional requirements of a remote-control centre.

A correspondence group will, until MSC 107 in June 2023, advance the initial steps of the development of a non-mandatory, goal-based code for MASS, noting that the overall discussions indicate deviating views on how to effectively address automation of ship functions.

A joint MASS working group for the IMO's Maritime Safety Committee (MSC), Legal Committee (LEG) and Facilitation Committee (FAL) will be established to address common high-priority issues that were identified by the regulatory scoping exercises conducted by the three committees. The first meeting of the MSC/LEG/FAL working group will be held from 6 to 8 September 2022, subject to concurrent approval by FAL 46 (May 2022) and Council 127 (July 2022).

Maritime Safety Information (MSI) information providers

SOLAS amendments to accommodate all recognized mobile satellite providers entered into force on 1 January 2020. Both Inmarsat (UK) and Iridium (USA) are now recognized for use in the GMDSS.

MSC 105 urged providers of MSI, such as navigational information and meteorological forecasts or warnings, to make the necessary efforts to provide MSI on all approved recognized mobile satellite services.

The sub-committee on Navigation, Communications, Search and Rescue (NCSR) was requested to revise resolution A.707(17) on "Charges for distress, urgency and safety messages through the Inmarsat system" to take into account current recognized mobile satellite services and anticipate the recognition of future service providers.

Implementation of IMO instruments

Certificates and documents required to be carried on board ships

MSC 105 approved a draft list of certificates and documents required to be carried on board ships. The list will be issued as a joint circular superseding FAL.2/Circ.131-MEPC.1/Circ.873-MSC.1/Circ.1586-LEG.2/Circ.3, pending subsequent approval by the other Committees.

The items related to the amendments to MARPOL Annexes I, IV and VI regarding measures to reduce the carbon intensity of international shipping and unmanned non-self-propelled (UNSP) barges are put in square brackets pending entry into force of resolutions MEPC.330(76) and MEPC.328(76) respectively.

Carriage of cargoes and containers

Fuel cell power installations

Technological innovation and alternative fuels and/or energy sources for international shipping will be integral to achieving the overall decarbonization ambitions set out in the initial IMO strategy on greenhouse gas emissions.

MSC 105 approved interim guidelines for the safety of ships using fuel cell power installations. The goal of the interim guidelines is to provide an international standard for the arrangement and installation of fuel cell power installations on board ships.

The guidelines cover different aspects – from the fuel inlet to the fuel cell space to the exhaust gas system. For the fuel storage and the fuel supply to the fuel cell space, the specific chapters of the IGF Code apply.

Metallic materials for cryogenic service

MSC 105 approved draft amendments to the IGC and IGF Codes to include high manganese austenitic (hi-Mn) steel for cryogenic service. The amendments permit the use of high manganese austenitic steel for type A, B and C tanks, for among others butane and methane (LNG) as cargo or fuel.

The draft amendments to the IGC and IGF Codes are expected to enter into force on 1 January 2026, subject to adoption by MSC 106 (November 2022).

Amendments to incorporate a relevant test programme for stress corrosion resistance to the guidelines for hi-Mn steel (MSC.1/Circ.1599/Rev.1) and the guidelines for alternative metallic materials (MSC.1/Circ.1622) were approved.

Inspection programmes for cargo transport units (CTUs)

MSC 105 approved guidelines for the implementation of the inspection programmes for CTUs. The guidelines revise and broaden the current inspection programmes for CTUs and are applicable to all types of CTUs. MSC.1/Circ.1442 and MSC.1/Circ.1521 were revoked accordingly.

The guidelines include contamination and pest control provisions. A list of voluntary guidance on pest contamination was approved.

Unified interpretations of the IGC Code

MSC.1/Circ.1625 contains unified interpretations of the international code for the construction and equipment of ships carrying liquefied gases in bulk (IGC Code).

MSC 105 approved amendments to MSC.1/Circ.1625 to clarify the term “ducts” in paragraphs 5.4.4 and 5.13.2.4 concerning process pressure vessels and liquid, vapour and pressure piping systems.

Ship design and construction

Industrial personnel

A growing offshore renewable energy sector (e.g. wind farms) has led to demand for ships which may transport and accommodate industrial personnel working offshore.

MSC 105 approved a draft new SOLAS chapter XV and a related mandatory draft new international code of safety for ships carrying industrial personnel (IP Code).

The draft new regulations are applicable to cargo ships and to high-speed cargo craft not carrying more than 60 persons, which are:

- of 500 gross tonnage and over, and
- operating on international voyages, and
- carrying more than a total of 12 industrial personnel, special personnel and passengers combined.

The draft new IP Code is based on the Code of Safety for Special Purpose Ships (2008 SPS Code), but with adaptations and provisions also for the training of industrial personnel, safe transfer of personnel and the carriage of dangerous goods. All types of cargo ships could carry industrial personnel when complying with the IP Code, however ships carrying toxic products, low-flashpoint products and acids as cargo are not allowed to have more than 60 persons on board.

The draft new regulations will apply to ships constructed on or after the entry into force date, and to existing ships starting to carry industrial personnel after that date. Grandfather provisions will allow existing cargo ships and high-speed cargo craft already carrying industrial personnel to obtain certification by complying with parts of the IP Code, i.e. the provisions for training, safe personnel transfer, life-saving appliances and the carriage of dangerous goods.

The draft SOLAS Ch. XV and IP Code are expected to enter into force on 1 July 2024, subject to adoption by MSC 106 (November 2022).

Second-generation intact stability criteria

MSC 105 approved explanatory notes to the interim guidelines, following the approval of the interim guidelines on the second-generation intact stability criteria (MSC.1/Circ.1627) in 2020. The new second-generation intact stability criteria are performance-based and rely on advanced numerical simulations or simplified criteria in addition to operational measures.

Enhanced survey programme (ESP)

MSC 105 approved draft amendments to the 2011 ESP Code to enhance consistent implementation of survey requirements. The main amendments are summarized below:

Bulk carriers:

- Ballast tanks to be examined annually if the protective coating condition is found to be “less than GOOD”.
- Double-skin void spaces bounding cargo holds in bulk carriers exceeding 20 years of age and 150 m in length to be examined annually if the protective coating is found to be “POOR”.
- New requirements to the annual survey of double-skin void spaces, when required, for bulk carriers exceeding 20 years of age and 150 m in length.

Oil tankers:

- Amended definition of oil tankers to clarify that the ESP Code does not apply to oil tankers carrying oil in independent tanks which are not part of ship's hull (e.g. asphalt carriers).

The draft amendments are expected to enter into force on 1 January 2026, subject to adoption by MSC 106 (November 2022).

Unified interpretations

SOLAS Chapter II-1 – timber deck cargo

MSC 105 approved a unified interpretation of SOLAS Chapter II-1, Regulation 5-1 to address how buoyant timber deck cargo should be accounted for in damage stability calculations.

Code on noise levels on board ships – noise in workshops

MSC 105 approved a unified interpretation of paragraph 4.2.1 of the Code on Noise Levels on Board Ships (MSC.337(91)) to clarify the term “workshops other than those forming part of machinery spaces”. To protect personnel from unhealthy working conditions, the noise level in such enclosed workshops should be a maximum of 85 db(A).

1988 Load Lines Protocol – freeboard calculations

MSC 105 approved a unified interpretation of paragraph 37(3) of Annex B to the 1988 Load Lines Protocol to clarify how superstructure deductions should be accounted for in freeboard calculations.

SOLAS Chapter II-1 – alterations of lightweight

MSC 105 approved a unified interpretation of SOLAS Chapter II-1, Regulations 5.4 and 5.5 to clarify when stability information should be amended in case of lightweight alterations, i.e. weights added, removed or relocated on board after the last approved inclining test.

Performance standards for water level detectors

MSC 105 approved the revised draft “Performance standards for water level detectors on ships subject to SOLAS regulations II-1/25, II-1/25-1 and XII/12” (Resolution MSC.188(79)/Rev.1), applicable to bulk carriers, single-hold cargo ships other than bulk carriers and multiple hold cargo ships other than bulk carriers. The revision of the performance standards is a consequence of the harmonization of the SOLAS requirements for bulk carriers and non-bulk carriers.

The revised performance standard will be applied to water level detectors installed on or after 1 January 2024. In addition to expanding its application to multiple-hold cargo ships, the revised standard contains clarifications on requirements to bilge alarms used as water level detectors, audible and visual alarms, and testing.

Human element, training and watchkeeping

The role of the human element

MSC 105 approved draft amendments to the “Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies” (MSC-MEPC.1/Circ.5/Rev.2), including a revised checklist for considering human element issues by IMO bodies.

Joint ILO/IMO tripartite working group

MSC 105 approved the terms of reference for a joint ILO/IMO tripartite working group to identify and address seafarers’ issues and the human element, and to consider bullying and harassment, including sexual assault and harassment, in the maritime sector.

Work programme

MSC 105 agreed to the following new work items:

Sub-Committee on Ship Systems and Equipment

Electrical equipment on MODUs

Development of amendments to Chapter 6 of the 2009 MODU Code regarding electrical equipment capable of operation after shutdown.

Inert gas systems for tankers

Development of amendments to Chapter 15 of the FSS Code on enclosed spaces containing a nitrogen receiver or a buffer tank of nitrogen generator systems.

Structural fire protection

Review and update of SOLAS Regulation II-2/9 on the containment of fire to incorporate existing guidance and clarify requirements.

Steering and propulsion

Revision of SOLAS Chapters II-1 (part C) and V, and related instruments, to address both traditional and non-traditional propulsion and steering systems.

Plastic piping on ships

Revision of the “Guidelines for the application of plastic pipes on ships” (resolution A.753(18)).

Fire risk of ships carrying new energy vehicles

Evaluation of the adequacy of fire protection, detection and extinction arrangements in vehicle, special category and ro-ro spaces in order to reduce the fire risk of ships carrying new energy vehicles.

Sub-Committee on Navigation, Communications, Search and Rescue

Electronic Nautical Publications (ENPs)

Development of guidelines for the use of Electronic Nautical Publications (ENPs).

ECDIS performance standards

Amendment to the revised ECDIS Performance Standards (resolution MSC.232(82)) to facilitate a standardized digital exchange of ships’ route plans.

Sub-Committee on Human Element, Training and Watchkeeping

STCW Convention and Code

Comprehensive review of the 1978 STCW Convention and Code.

Sub-Committee on Carriage of Cargoes and Containers

Ammonia as fuel

Development of guidelines for the safety of ships using ammonia as fuel (to be linked with ongoing work).

Carriage of liquefied hydrogen in bulk

Revision of the interim recommendations for carriage of liquefied hydrogen in bulk.

Recommendations

Our customers may take note that MSC 105 was the last session to adopt amendments to the 2024 update of SOLAS and the related mandatory codes.

Contact

For customers:

DATE – Direct Access to Technical Experts via [My Services](#) on Veracity.

Otherwise:

Use our [office locator](#) to find the nearest DNV office.

Provisional list of resolutions and circulars

Please note that the list and document references are provisional:

RESOLUTION MSC.495(105)

Actions to facilitate the urgent evacuation of seafarers from the war zone area in and around the Black Sea and the Sea of Azov as a result of the Russian Federation aggression against Ukraine.

RESOLUTION MSC.496(105)

Amendments to the International Convention for the Safety of Life at Sea, 1974

RESOLUTION MSC.497(105)

Amendments to the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974

RESOLUTION MSC.498(105)

Amendments to the International Code of Safety for High-Speed Craft, 1994 (1994 HSC Code)

RESOLUTION MSC.499(105)

Amendments to the International Code of Safety for High-Speed Craft, 2000 (2000 HSC Code)

RESOLUTION MSC.500(105)

Amendments to the International Maritime Solid Bulk Cargoes (IMSBC Code)

RESOLUTION MSC.501(105)

Amendments to the International Maritime Dangerous Goods (IMDG) Code

RESOLUTION MSC.502(105)

Amendments to the Code of Safety for Special Purpose Ships, 1983 (1983 SPS Code)

RESOLUTION MSC.503(105)

Amendments to the Code of Safety for Special Purpose Ships, 2008 (2008 SPS Code)

RESOLUTION MSC.504(105)

Amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1979 (1979 MODU Code)

RESOLUTION MSC.505(105)

Amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989 (1989 MODU Code)

RESOLUTION MSC.506(105)

Amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009 (2009 MODU Code)

RESOLUTION MSC.507(105)

System performance standard for the promulgation and coordination of maritime safety information using high-frequency narrow-band direct-printing

RESOLUTION MSC.508(105)

Performance standards for the reception of maritime safety information and search and rescue related information by MF (NAVTEX) and HF

RESOLUTION MSC.509(105)

Provision of radio services for the global maritime distress and safety system (GMDSS)

RESOLUTION MSC.510(105)

Performance standards for search and rescue radar transponders

RESOLUTION MSC.511(105)

Performance standards for shipborne VHF radio installations capable of voice communication and digital selective calling

RESOLUTION MSC.512(105)

Performance standards for shipborne MF and MF/HF radio installations capable of voice communication, digital selective calling and reception of maritime safety information and search and rescue related information

RESOLUTION MSC.513(105)

Performance standards for Inmarsat-C ship earth stations capable of transmitting and receiving direct-printing communications

RESOLUTION MSC.514(105)

Guidelines for the avoidance of false distress alerts

RESOLUTION MSC.515(105)

Performance standards for survival craft portable two-way VHF radiotelephone apparatus

RESOLUTION MSC.516(105)

Amendments to the performance standards for radiocommunication equipment (resolution MSC.80(70))

RESOLUTION MSC.517(105)

Performance standards for a shipborne integrated communication system (ICS) when used in the Global Maritime Distress And Safety System (GMDSS)

RESOLUTION MSC.518(105)

Model regulations on domestic ferry safety

RESOLUTION MSC.188(79)/REV.1

Revised performance standards for water level detectors on ships subject to SOLAS regulations II-1/25, II-1/25-1 and XII/12

MSC.1/Circ.803/Rev.1

Participation of non-SOLAS ships in the Global Maritime Distress and Safety System (GMDSS) and guidance on the development of training materials for GMDSS operators on non-SOLAS ships

MSC.1/Circ.1645

Guidance for the reception of maritime safety information and search and rescue related information as required in the Global Maritime Distress and Safety System (GMDSS)

MSC.1/Circ.1600/Rev.1

Guidance for conducting the refined MHB (CR) test

MSC.1/Circ.1395/Rev.5

Lists of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted or for which a fixed gas fire-extinguishing system is ineffective

MSC.1/Circ.1588/Rev.2

Amendments to the Revised Emergency Response Procedures for Ships Carrying Dangerous Goods (MSC.1/Circ.1588/Rev.1) (EmS Guide)

MSC.1/Circ.1361/Rev.1

Revised recommendations on the safe use of pesticides in ships applicable to the fumigation of cargo transport units

MSC.1/Circ.1646, FAL.2/Circ.[...], MEPC.1/Circ.[...], LEG.2/Circ.[...]

List of certificates and documents required to be carried on board ships, 2022

MSC.1/Circ.1647

Interim guidelines for the safety of ships using fuel cell power installations

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)

MSC.1/Circ.1599/Rev.2

Revised Guidelines on the application of high manganese austenitic steel for cryogenic service

MSC.1/Circ.1649

Guidelines for the implementation of the inspection programmes for cargo transport units

MSC.1/Circ.1650

List of non-exhaustive voluntary guidance on pest contamination

MSC.1/Circ.1651

Amendments to MSC.1/Circ.1625 on unified interpretations of the IGC Code (as amended by resolution MSC.370(93))

MSC.1/Circ.1652

Explanatory notes to the Interim Guidelines on second generation intact stability criteria

MSC.1/Circ.1653

Unified interpretation regarding timber deck cargo in the context of damage stability requirements

MSC.1/Circ.1654

Unified interpretation on the noise level limit in workshops on board ships

MSC.1/Circ.1535/Rev.2

Unified interpretations relating to the Protocol of 1988 relating to the International Convention on Load Lines, 1966

MSC.1/Circ.1362/Rev.1

Unified interpretation of SOLAS chapter II-1

MSC.1/Circ.1164/Rev.25

Promulgation of information related to reports of independent evaluation submitted by Parties to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978 confirmed by the Maritime Safety Committee to have communicated information which demonstrates that Parties are giving full and complete effect to the relevant provisions of the Convention

MSC.1/Circ.797/Rev.37

List of competent persons maintained by the Secretary-General pursuant to section A-I/7 of the STCW Code