IMO SUB-COMMITTEE ON SHIP SYSTEMS AND EQUIPMENT (SSE 11)

Relevant for shipowners, ship managers, seafarers, maritime training institutes and flag states. February 2025

The 11th session of the IMO Sub-Committee on Ship Systems and Equipment (SSE 11) took place from 24 to 28 February 2025. SSE 11 agreed on draft amendments to the design and prototype test requirements for the arrangements used in simulated the launching of free-fall lifeboats. Measures for the detection and control of fires in the cargo areas of container ships were progressed, and an action plan for the consideration of fire risks for ships carrying electrical vehicles and other new-energy vehicles were agreed. Ventilation requirements for partially enclosed lifeboats were drafted.

Meeting highlights

- Finalized draft amendments to the LSA Code to improve the safety of the simulated launching of free-fall lifeboats
- Finalized a draft revision of the Code of Practice for Atmospheric Oil Mist Detectors (MSC/Circ.1086)
- Progressed measures to enhance the fire safety of container ships
- Progressed measures to reduce the fire risk of ships carrying new-energy vehicles
- Progressed the development of mandatory ventilation requirements for partly enclosed lifeboats

Container ship fire safety

Several serious fires in the cargo area on container ships have exposed technical challenges related to locating, containing and fighting fires in containers.

SSE 11 progressed measures for the detection and control of fires in the cargo areas, in particular:

- Requirements for portable infrared thermal imagers, suitable for screening containers and detecting hot areas
- Requirements and performance standards for water mist lances, including means for extended reach of containers
- Requirements and performance standards for mobile water monitors and fixed water monitors

The draft requirements will be further considered in a Correspondence Group until SSE 12 in 2026, together with other measures such as:

- Water protection systems below the hatch coaming and pontoon hatches
- Video fire detection systems for deck cargo spaces

Any agreed draft SOLAS amendments are expected to enter into force in 2032, subject to approval and adoption by the MSC.

Carriage of new-energy and electric vehicles

An increasing number of electrical vehicles and other new-energy vehicles are being carried on board ships, and the IMO has agreed to consider whether there is additional fire risks involved, for example related to the carriage of lithium-ion battery-powered vehicles.

SSE 11 developed an action plan to evaluate 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.

The action plan includes the analysis of reports, studies and technologies, the identification of hazards and the development of related goal-based measures.

Any agreed draft SOLAS amendments are expected to enter into force in 2032, subject to approval and adoption by the MSC.

Containment of fire (SOLAS Regulation II-2/9)

SOLAS Regulation II-2/9 focuses on the containment of fire on ships, i.e. to ensure that a potential fire is contained within the space where it originated by providing requirements to fire integrity and insulation of boundaries, including openings and penetrations within those boundaries. Since the adoption of the current regulation in 2000, numerous Unified Interpretations have been developed.

A Correspondence Group will consider draft amendments to SOLAS Regulation II-2/9 until SSE 12 in 2026, with a view to incorporate existing guidance documents into the regulatory text to ensure consistent implementation and provide a single source of applicable requirements.

Revision of the 2010 Fire Test Procedure (FTP) Code

The 2010 FTP Code specifies test procedures to be used by fire test laboratories when testing and evaluating products (e.g. bulkheads, ceilings, doors, surface materials, penetrations).

Draft amendments to the 2010 FTP Code to accommodate new fire protection systems and materials will be considered in a Correspondence Group until SSE 12 in 2026.

Atmospheric oil mist detectors

Engine room fires remain the most frequent fire on board ships, with oil spray or mist leaking onto hot surfaces being a primary cause.

SSE 11 finalized a draft revision of the non-mandatory Code of Practice for Atmospheric Oil Mist Detectors (MSC/Circ.1086) to reflect experiences, current practices and new technologies since the Code was approved in 2003.

The draft revision will be submitted to MSC 110 (June 2025) for approval.

Ventilation of survival craft

MSC 107 adopted amendments to the Life-Saving Appliances (LSA) Code to mandate the ventilation of totally enclosed lifeboats.

SSE 11 developed draft amendments to the LSA Code to include similar ventilation requirements also for partly enclosed lifeboats. The draft of a new paragraph, 4.5.5, suggests that means should be provided to achieve a long-term CO_2 concentration inside partially enclosed lifeboats of below 5,000 ppm, i.e. using the same basis as for totally enclosed lifeboats. One practical solution is an active ventilation of 5 m^3/hr per person.

The draft amendments to the LSA Code will be progressed in a Correspondence Group until SSE 12 in 2026.

Simulated launching of free-fall lifeboats

Free-fall lifeboats are typically tested without actually launching the free-fall lifeboats into the water, i.e. a simulated launching.

SSE 11 finalized draft amendments to the LSA Code to require the simulation equipment (e.g. wires, chains) used for maintenance and testing to be designed and approved to account for the shock loading that may occur when the lifeboat comes to a sudden stop on the skid.

The draft of a new paragraph, 4.7.7, requires that the arrangement to test the release system under load is designed with a safety factor of at least 6 on the basis of the calculated maximum working load and the ultimate strength of the materials used for its construction.

Consequentially, draft amendments to the following instruments were agreed:

- MSC.81(70) – Revised recommendation on the testing of life-saving appliances
- MSC.402(96) – Requirements for the maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear
- MSC.1/Circ.1205/Rev.1 – Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems
- MSC.1/Circ.1529 – Unified Interpretations of paragraph 4.4.7.6 of the LSA Code, as amended by Resolution MSC.320(89)
- MSC.1/Circ.1578 – Guidelines on Safety During Abandon Ship Drills Using Lifeboats
- MSC.1/Circ.1630/Rev.3 – Revised Standardized Life-Saving Appliance Evaluation and Test Report Forms

The draft amendments to the LSA Code, Resolution MSC.81(70) and Resolution MSC.402(96) are expected to enter into force on 1 January 2028 and be applicable to free-fall lifeboats installed on or after 1 January 2031, subject to approval by MSC 110 (June 2025) and subsequent adoption by MSC 111.

The draft amendments to MSC.1/Circ.1205/Rev.1, MSC.1/Circ.1529, MSC.1/Circ.1578 and MSC.1/Circ.1630/Rev.3 will be submitted to MSC 111 (2026) for approval.

Self-righting or canopied reversible life rafts

Life rafts on ro-ro passenger ships are required to be either automatically self-righting, or canopied reversible life rafts which can operate safely whichever way it is floating.

SSE 11 considered draft amendments to SOLAS Chapter III and the LSA Code Chapter IV to expand the requirement for the carriage of self-righting or canopied reversible life rafts to other ship types, i.e. new cargo and passenger ships. It was agreed to exempt only life rafts with a capacity of less than 12 persons from the draft of the new requirements.

A Correspondence Group will progress the work until SSE 12 in 2026.

Maintenance and testing of life-saving appliances

SSE 11 progressed a comprehensive review of the "Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear" (Resolution MSC.402(96)) to address challenges with the implementation of the requirements.

SSE 11 agreed in principle to the following draft of new definitions for "make", "type", "model" and "series", for inclusion in Resolution MSC.402(96), to clarify which equipment LSA service providers are authorized to work on:

- Make: original manufacturer of the type, model and series of equipment, as referred to on the approval certificate and/or ID plate, as appropriate
- Type: category of equipment having common functional or design characteristics
- Model: a specific version of a particular make and type, as referred to on the approval certificate and/or ID plate, as appropriate
- Series: a specific range of models from the same manufacturer that have equivalent design characteristics and maintenance requirements

The ISO was further invited to update ISO 23678:2022 to align with the draft of the new definitions, so that the standard could be considered referenced by a footnote in Resolution MSC.402(96).

The amendments are expected to be finalized in a later session and are expected to enter into force on 1 January 2032.

Unified Interpretations (UIs)

The following draft UIs were agreed and will be submitted to MSC 110 (June 2025) for approval:

Factual statement for non-certified lifting appliances

SSE 11 agreed to a draft UI providing the factual statement for the testing and thorough examination of non-certified lifting appliances.

Implementation of the PFOS ban

SSE 11 agreed to a draft UI of SOLAS Regulation II-2/10.11 and of the 1994 and 2000 HSC Codes to clarify how the PFOS ban may be documented.

Spacing of combined smoke and heat detectors

SSE 11 agreed to a draft UI of paragraph 2.4.2.2 of Chapter 9 of the FSS Code relating to the spacing of combined smoke and heat detectors.

Launching of rescue boats on cargo ships

SSE 11 agreed to a draft UI of paragraphs 6.1.1.3 and 6.1.2.2 of the LSA Code to clarify that for cargo ships, manual hoisting of a dedicated rescue boat may be acceptable for subsequent slewing by stored mechanical power.

IACS UIs

SSE 11 noted the following UIs published by the International Association of Classification Societies (IACS):

- IACS UI SC211/Rev.2: UI of SOLAS Regulations II-2/3.6 and II-2/4.5.1 to clarify how spaces in the forecastle area of tankers are categorized within the cargo area
- IACS UI SC307: UI of SOLAS Regulation II-2/4.5.10 regarding the protection of cargo pump rooms
- IACS UI SC269: UI of SOLAS regulation II-2/13.4.2 regarding the means of escape from the steering gear spaces in cargo ships
- IACS UI SC11: UI of the vague phrase "other high fire risk areas" used in SOLAS Regulation II-1/45.5.3
- IACS UI SC305: UI of SOLAS Regulation II-1/26.2 relating to the reliability of single essential propulsion components

Validated model training courses

IMO Model Courses intend to assist instructors in developing training programmes for seafarers as per the International Convention of Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978. The model courses are subject to regular review to ensure they are consistent with the current IMO instruments and reflect best practices and modern technologies.

SSE 11 validated a revision of Model course 3.05 "Survey of Fire Appliances and Provisions". A revision of Model Course 3.06 "Survey of Life-Saving Appliances and Arrangements" is planned for validation at SSE 12 in 2026.

Any other business

Lifejacket buoyancy test

SSE 11 agreed to minor corrections to Resolution MSC.81(70) and MSC.1/Circ.1628/Rev.1 on the procedure for lifejacket buoyancy tests and acceptance criteria for consistency with the LSA Code.

Survival equipment for survival craft and rescue boats
SSE 11 agreed to a minor correction to the LSA Code to reflect the latest version of the ISO 18813:2022 standard.

Recommendations

As SSE is a Sub-Committee, all decisions concerning rules, regulations and dates are subject to further consideration and approval by the Maritime Safety Committee (MSC). DNV recommends that our customers monitor the outcome of MSC 110 in June 2025.

DNV class customers are encouraged to visit the Compliance Planner to monitor how upcoming statutory requirements will impact their ships.

Contact

For customers:
DATE – Direct Access to Technical Experts via *My Services* on Veracity.

Otherwise:
Use our *office locator* to find the nearest office.