

IMO SSE 10 Meeting Summary

March 25, 2024



The 10th session of the International Maritime Organization Sub-Committee on Ship Systems and Equipment (SSE 10) was held 4 – 8 March at the IMO Headquarters in London, supplemented by hybrid (remote) arrangements.

LISCR participated in the following groups, in addition to the plenary.

| Working Group (WG) | Agenda item |
|--------------------|---|
| WG 1 | Working Group on Life-Saving Appliances |
| WG 2 | Working Group on Fire Protection |

Opening

At the opening of the meeting, many delegations expressed concerns for the safety of ships and their crew following attacks by Houthi rebels on commercial ships in the Red Sea and the Gulf of Aden and, in this respect, commended the Secretary-General's effort in bringing this to the attention of the United Nations Security Council at its special session on 3 January 2024. Delegations that took the floor condemned the acts against commercial ships and seafarers while expressing grave concern for the region and the disruption caused to international trade.

As the attack continued during the session, further concerns and sorrows were expressed during the meeting.

Ventilation of survival craft

107th session of the Maritime Safety Committee (MSC 107) adopted amendments to the Life-Saving Appliances (LSA) Code (MSC.535(107)) to mandate ventilation of totally enclosed lifeboats and amendments to the *Revised recommendations on testing of lifesaving appliances* (MSC.81(70)). The draft amendments are expected to enter into force on 1 January 2026 for a totally enclosed lifeboat installed on or after 1 January 2029.

At SSE 10, opinions were almost equally split regarding the compelling need for applying the ventilation requirements to partially enclosed lifeboat and liferaft. SSE 10, therefore invited Member States and International Organization to further submit information on justification on the scope of application.

Operational testing of free-fall lifeboat

SSE 10 considered technical details of the simulation launching device for a free-fall lifeboat, including amendments to the LSA Code.

While SSE 10 prepared draft amendments to the LSA Code, the following issues were pending, which were tasked to the correspondence group (CG):

- Whether the device is to be made of corrosion-resistant materials;
- Movement of the lifeboat during the testing and shock load;
- Preparing other relevant IMO Instruments for testing (i.e. MSC.81(70)), reporting (MSC.1/Circ.1630/Rev.2), maintenance (MSC.402(96)) and possible others.

Self-righting or canopied reversible liferafts

SOLAS requires liferafts on ro-ro passenger ships to be either automatically self-righting, or a canopied reversible liferaft which can operate safely whichever way it is floating. Similar requirements are currently not applicable to other ship types. For larger conventional liferafts, righting in an emergency may be challenging due to injuries, exhaustion, adverse sea conditions or the dimensions.

MSC 99 considered the proposal to require 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).

At SSE 10, opinions were divided whether to the requirements to both cargo and passenger ships, limit the application to cargo ships only, or not to apply any type of ships at all. The matter will be further discussed at SSE 11 scheduled for February 2024.

Harmonization of Lifejacket requirements between SOLAS and the HSC Codes

SSE 10 developed amendments to the 1994 and 2000 HSC Codes to harmonize the lifejacket requirements with those in SOLAS chapter III for approval by MSC 109 and subsequent adoption by MSC 110. The changes were:

- For passenger craft on voyages less than 24 hours, a number of infant lifejackets equal to at least 2.5% of the number of passengers on board should be provided;
- For passenger craft on voyages 24 hours or greater, infant lifejackets should 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 should be available on board to allow them to be secured to such persons;
- Existing HSC certificates are revised to indicate the number of infant lifejackets.

While the expected entry into force will be 1 January 2028, the existing craft is to comply with the requirements at the next renewal survey after the entry into force.

Container ship fire prevention

MSC 106 agreed to establish the FSA Experts Group to review the outcome of any relevant FSA studies concerning detection and control of fires in cargo holds and on the cargo deck of containerships.

SSE 10 addressed various fire safety measures for container ship, taking into account that associated risk and control measures may be different, depending on the size of the vessel.

SSE 10 considered detection and fire-fighting systems as follows:

- Fixed fire detection within the cargo hold: While keeping the current sample extraction smoke detection systems given in the FSS Code, noted possible use of the linear heat detection system;
- On deck containers: While video detection system and linear heat detection were considered, SSE 10 agreed to consider the matter at SSE 11;
- Portable detection equipment: While the Infra-Red (IR) portable detection equipment was considered, no conclusion was reached, and the CG was tasked to consider the matter further;
- Fire mist lance: The usefulness of the lance would be further considered by the CG;
- Mobile water monitors: SSE 10 noted the limitation of the system, however, that could be improved by introducing remote directional control. This was also tasked to the CG;
- Fixed water monitors: SSE 10 concluded that fixed water monitors would not be the replacement for mobile water monitors and have various limitations, including susceptibility to damage during cargo operation; and
- Fixed CO₂ systems: SSE 10 noted the reliability issue associated with the system and tasked CG to consider the matter further.

SSE 10 also noted the need for further discussion on the protection of hatch cover, and agreed to consider the issue at the next session.

SSE 10 also agreed to invite the Sub-Committee on Carriage of Cargoes and Containers (CCC) to address training of shore personnel, shipper's declaration, container scanning, stowage provision etc., and the Sub-Committee on Human Element, Training and Watchkeeping (HTW) to address training of seafarers.

Model training course

SSE 10 developed Model Course 3.04 on Survey of Electrical Installations.

Unified interpretation

Fire Safety

Crowns and casings

SSE 10 agreed on the following interpretation for approval by MSC 109:

"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."

Secondary means of ventilation – alarm setting

SSE 10 agree on the following interpretation for SOLAS regulation II-2/4.5.3.2.2 and II-2/11.6.3.2 for approval by MSC 109:

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.

Isolation of non-hazardous spaces

SSE 10 agreed on the Unified Interpretation for approval by MSC 109. The UI applies to the system installed on or after 1 January 2026. The interpretation addresses SOLAS Regulation II-2/4.5.6.1 and paragraphs 3.1.2, 3.1.4 and 3.5.3 of the IBC Code and stipulates 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. However, gas-freeing air-supply fan(s)/blower(s) and related air-supply piping/ducts may be located in the forecastle area with isolation arrangements. The interpretation also addresses the operational procedures.

Interpretation on galley duct

SSE 10 agreed on a minor editorial correction (to replace reference “SOLAS regulation II-2/9.7.5” with “SOLAS regulation II-2/9.7.5.1”) for approval by MSC 109 for circulation as MSC.1/Circ.1276/Rev.2.

LSA matters

Maintenance of rescue boat (applicability of resolution MSC.402(96) to inflated rescue boat)

SSE 10 agreed on the Unified Interpretation that SOLAS regulation III/20.11 and resolution MSC.402(96) should also be applicable to inflated rescue boats, for approval by MSC 109.

Engineering matter

Single essential propulsion

SSE 10 agreed on the interpretation of SOLAS regulation II-1/26 for approval by MSC 109 with an effective date of 1 January 2026 for new installations. The key features of the interpretation are:

- Single electric propulsion motors (both single and dual winding with a single rotor) for main propulsion should not be considered to provide the reliability required for a single essential propulsion component. A separate propulsion unit sufficient to give the ship a navigable speed should be required for such arrangements; and
- Propulsion arrangements with two independent rotors on a single shaft should be considered to provide the required reliability, provided it is possible to de-excite or de-flux each of the rotors individually and to supply independently the stators.

Prohibiting the use of fire-fighting foams containing fluorinated substances (PFAS)

MSC 107 adopted amendments to SOLAS chapter II-2, the 1994 HSC Code and the 2000 HSC Code introducing the prohibition of perfluorooctane sulfonic acid (PFOS) fire-extinguishing media used in fire-fighting foams (resolutions MSC.532(107), MSC.536(107) and MSC.537(107)).

SSE 9 instructed the FP Correspondence Group (CG) to further consider prohibiting the use of fire-fighting foams containing fluorinated substances, such as perfluorooctanoic acid (PFOA), in addition to PFOS, for fire-fighting on board ships.

Having reviewed the report of the CG, SSE 10 concluded that the banning of fluorinated substances in foam concentrates was not necessary at this stage.

Maintenance of lifeboat launching appliances and release gear

SSE 10 addressed matters associated with *Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear* (resolution MSC.402(96)).

Submissions to SSE 10 and opinions expressed during the meeting addressed:

- Definition of “make” and “type”, etc.;
- Role of ISO Standard 23678;
- Expanding the application of resolution MSC.402(96) to the HSC and MODU Codes;
- Manufacturer’s training and certification programme;
- Development of a database of authorized service providers (ASP);
- Access to original spare parts, maintenance instructions; and
- Possible inclusion of all “suspension part”.

Due to the complexity of the issue and lack of time, SSE 10 could not come to any tangible agreement. The matter will be further addressed in the CG, in particular, to address the list of issues identified during SSE 10, including:

- Authorization of service providers, including equipment manufacturers;
- Manufacturer's established certification programme;
- Clarification of the certification of personnel;
- Definitions of various terms; and
- Timing of annual servicing.

The general understanding at the meeting was clarification of “type” and “make” was the highest priority issue.

Immersion suits

MSC 107 adopted the amendments to resolution MSC.81(70) (MSC.544(107)) and approved MSC.1/Circ.1628/Rev.1 on Revised standardized life-saving appliance evaluation and test report forms (personal life-saving appliances) on the use of the thermal manikins.

SSE 10 noted the result of research on the use of thermal manikins and requested the IMO Secretariat, if possible, to create a GISIS module on the list of test laboratories.

Carriage of new energy vehicles

SSE 10 recalled that MSC 107 (June 2023) approved draft amendments to SOLAS Chapter II-2 and associated instruments to reduce the risk of fire in Ro-ro and special category spaces on Ro-ro passenger ships for adoption by MSC 108 (May 2024) for entry into force on 1 January 2026. The Sub-Committee on Carriage of Cargoes and Containers (CCC) has also been examining fire safety of the carriage of battery and battery (and other) vehicles in conjunction with the IMDG Code. The SSE Sub-Committee focused on the risk of fire in vehicle spaces, Ro-ro spaces and special category spaces of ships carrying new energy vehicles.

SSE 10 developed the roadmap for future work and exchanged various information. While the current water-based fire-fighting system was considered sufficient, there were a lot of other issues to be properly addressed, such as early detection and response, training of crew, etc.

Other key issues SSE 10 addressed were:

- Different characteristics of fire associated with Battery Electric Vehicles (BEVs), when compared to Internal Combustion Engine Vehicles, including thermal runaway for BEVs; and
- Fire ratings for the boundaries of vehicle, Ro-ro and special category spaces might need to be reconsidered.

SSE 10 set up the CG to:

- review and share relevant and credible information including scientific studies, accident reports, etc.;
- further consider fixed fire detection systems within vehicle spaces and ro-ro spaces on cargo ships, e.g. heat and smoke detectors; and
- further consider fire confirmation (video monitoring system) within vehicle spaces and ro-ro spaces on cargo ships.

Any other business

Revision of MSC/Circ.677 on P/V valves

MSC 106 considered the document informing MSC of the 2021 revision of the standard for ship pressure-vacuum relief valves and devices to prevent the passage of flame into cargo tanks for updating reference in the MSC/Circ.677.

SSE 10 agreed to the draft revision of MSC/Circ.677, with a view to approval by MSC 109 and dissemination as MSC.1/Circ.677/Rev.1 on *Standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers*, with the effective date of two years after the expected approval of the draft revised circular.

FURTHER INFORMATION

For further information please contact: imo@lisrcr.com

Annex

Provisional list of draft circulars and resolutions

- Amendments to the 1994 and 2000 HSC Codes on lifejacket requirements
- Unified interpretation on SOLAS Regulation II-2/11.4.1 regarding the crown of a machinery space of category A
- Unified interpretation on SOLAS regulation II-2/4.5.3.2.2 and II-2/11.6.3.2 pressure sensor setting of cargo tanks of tankers
- Unified interpretation on 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 Isolation of non-hazardous spaces
- Correction to the Unified interpretation on galley duct (MSC.1/Circ.1276/Rev.1)
- Unified interpretation on the applicability of resolution MSC.402(96) to the inflated rescue boats
- Unified interpretation of SOLAS regulation II-1/26 on Single essential propulsion
- Revision to the MSC Circular on Standards for the design, testing and locating of devices to prevent the passage of flame into cargo tanks in tankers
- Amendments to SOLAS regulations II-2/11.2 and II-2/11.4.1 for consistent implementation of this provision for passenger ships and cargo ships
- Further revision to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)) on the average mass of a person