

# IMO SSE 8 Meeting Summary

March 14, 2022

The 8th session of the IMO’s Sub-Committee on Ship Systems and Equipment (SSE 8) was held 28 February - 4 March 2022 online.

Liberia participated in plenary and the following groups:

	Agenda item
WG 1	Life-saving appliances (LSA)
WG 2	Fire protection (FP)
WG 3	Onboard lifting appliances and anchor handling winches (OLAW)
EG	Revision of the 1995 Code of Safety for Diving Systems

## LIFE SAVING APPLIANCES

### New requirements for ventilation of survival craft

The MOL Comfort incidents (2013) triggered this work as crew escaped in a totally enclosed lifeboat suffered dehydration due to the extreme temperature. SSE 7 (2020) completed the work for totally enclosed lifeboats. The focus at SSE 8 was ventilation arrangements and test procedures for liferaft and partially enclosed lifeboats.

For liferaft, while the intention was to meet the requirements through natural ventilation, as an option, mechanical ventilation was also included.

The requirements will be made mandatory through amendments to the LSA Code, and subject to approval at MSC 106 and subsequent adoption at MSC 107, which will enter into force on 1 January 2026 for new survival craft installed on or after 1 January 2029 on the building contract basis. SSE 8 also revised the relevant part of the *Revised Recommendation on Testing of Life-saving Appliances* (resolution MSC.81(70)).

Some members considered further technical research was needed, thus this agenda item was kept for the review of the research result at SSE 9 in 2023.

### Holistic review of SOLAS chapter III and the LSA Code

Various documents for discussion, e.g. lifeboat seat belt colours, immersion suits (donning training), evaluation of

hazard associated with the escape etc. was submitted for discussion. However, noting a question on the scope of the work of this work program, the chair reminded SSE 8 of the action plan approved by MSC 102 and suggested deferring proposals on prescriptive requirements but focusing on hazard identification, setting goals, functional requirements and analyses of gaps etc.

SSE 8 agreed:

- To task the correspondence group (CG) to categorize proposal into three categories, i.e., 1 postpone unless work plan became mature enough to address concrete prescriptive requirements, 2 new work programme would be needed, 3 could be dealt with as a correction.
- To set up the Intersessional in-person Expert Group on hazard identification practice.

### Lifjacket

Due to time constraints, SSE 8 could not review the performance test to ensure an unconscious person would keep his/her face above water. SSE 8 tasked the CG to work further. Similarly, the proposed inclusion of “spray hood” was also tasked to the CG.

In addition, SSE 8 also reviewed how to indicate (display) donning instructions of lifejackets, however, rather than embarking on detailed discussion on this subject, agreed to include one of the “categorization” work as explained in “Holistic review of SOLAS Chapter III and the LSA Code”.

### Revised standardized life-saving appliance evaluation and

## test report forms (survival craft) (MSC.1/Circ.1630)

SSE 8 agreed with the consequential amendments to the *Revised Standardized Life-saving Appliance Evaluation and Test Report Forms (survival craft) (MSC.1/Circ.1630)*, regarding standards for coated fabric material tests for inflatable liferaft for approval by MSC 106. However, the relevant amendments regarding survival craft ventilation were tasked to the correspondence group.

## Forms of certificate

An NGO proposed corrections of certificate forms in relation to immersion suits and anti-exposure suits, i.e. to differentiate immersion suits that require lifejacket on top of that, and those not. Subsequently SSE 8 agreed on the minor corrections to the forms of the record of equipment for certificates in SOLAS, the HSC Code and the SPS Code pertaining to the type of immersion suits.

## Retro-reflective materials on life-saving appliances

A member State expressed the view that the retroreflected materials are not required on the bottom of self-righting lifeboats.

However, SSE 8 did not agree with the view.

## Postponement

Due to time constraints, the following were postponed to SSE 9 scheduled for 27 February – 3 March 2023.

- Spare bulbs if a torch uses LED bulbs;
- External colour of lifeboat; and
- Slewing out the rescue boat.

## POLAR OPERATIONS

### Survival in polar waters

SSE 8 reviewed the proposal and information on survival in polar regions, including food ration, maximum exposure period (time before reached by rescue services) etc.

SSE 8 agreed to accept “vessels of opportunity” concept (e.g. tandem operation) in the polar region for calculating expected exposure time (time after evacuation until rescue) and revised MSC.1/Circ.1614 on *Revised Interim Guidelines on Life-Saving Appliances and Arrangements for Ships Operating In Polar Waters* accordingly for approval by the 106th session of the Maritime Safety Committee (MSC 106) scheduled for November 2022.

## FIRE SAFETY

### Protection of ro-ros passenger ships

SSE 8 reviewed the draft amendments to the SOLAS

Convention and the FSS Code.

For new ro-ro passenger ships and passenger ships with vehicle space (expected entry into force on 1 January 2026):

- **fire detection and fire alarm system:** individually identifiable fixed fire detection and fire alarm system will be required in vehicle, special category and ro-ro spaces, with smoke and heat detection provided throughout those spaces. The system should also cover the area on the weather deck intended for the carriage of vehicles. The system interface should provide a logical and unambiguous presentation of information, to allow a quick and correct understanding and decision-making;
- **fixed water-based fire extinguishing system protecting weather deck where vehicles are carried:** such systems shall primarily use of water monitor(s), with nozzles being acceptable for areas which monitors could not cover. Detailed specifications for nozzles were developed, as well as water supply capacity;
- **Protection of openings:** openings in ro-ro spaces provided with closing devices such as steel A-class ramps and steel A-class doors should be permitted below survival craft and accommodation spaces (including service spaces and control stations);
- **Video recording:** 7 day video recording is required for new ships; and
- **Structural fire protection:** Ro-ro spaces and special category spaces are to be insulated to A-60 or A-0 requirements.

However, the following will be further addressed by the CG:

- Safe distance from openings

With regard to the existing passenger ships and passenger ships with vehicle spaces:

- **Video recording:** reduced to 24 hours (by the first survey on or after 1 January 2028).

And the following were tasked to the CG:

- Protection of weather deck;
- linear heat detection system; and
- scope of application and application date.

### Clarification of the terms used in MSC.1/Circ.1430/Rev.2

SSE 8 discussed clarification of “free height” (maximum height of the protected space - weather distance should be deck to deck or deck to beam) used in *The Revised Guidelines for the Design and Approval of Fixed Water-Based Fire-Fighting Systems for Ro-Ro Spaces and Special Category Spaces* (MSC.1/Circ.1430/Rev.2). Due to time constraints, the issue was deferred to the CG.

### Fire safety of lift trunks in ro-ro passenger ships

There was a proposal for amending SOLAS chapter II-2 on

fire safety of lift trunks passing through ro-ro spaces, special category spaces and accommodation spaces in ro-ro passenger ships, based on an analysis of recent accidents investigation reports.

SSE 8 however, agreed that the work would require a new work programme.

### **Carriage of vehicles with alternative power source (e.g. electric car)**

There was a submission paper on this subject, in addition to the statement about the recent fire (16 February 2022) on board the car carrier Felicity Ace, which was carrying electric vehicles at the time of the incident. However, SSE 8 agreed that further discussion on this subject would require a new work programme.

### **Dry chemical powder fire-extinguishing system**

The review of using sodium-based fire-fighting agents (known for clogging) was the trigger of the discussion. SSE 8 reviewed additional research results and considered test methods for type approval.

SSE 8 agreed on the performance-based approach and agreed and prepared the draft revision to MSC.1/Circ.1315 on *Guidelines for the approval of fixed dry chemical powder fire-extinguishing systems for the protection of ships carrying liquefied gases in bulk*, for approval by MSC 106.

SSE 8 agreed to apply the revised guidelines for the new installation on or after 1 July 2023.

### **Fire safety of container ships**

SSE 8 was the first technical discussion opportunity since the work program was approved by MSC. The focus was the roadmap toward the completion of the task and the overall approach to the problem. There was also a paper pointing out shortcomings of existing fire-fighting equipment.

Due to time constraints of the online meeting, the matter was addressed by pre-meeting correspondence and agreed to undertake a holistic FSA study by the Expert Group under MSC.

### **Fire protection of control stations on cargo ships**

There are editorial inconsistencies in SOLAS regulation II-2/5.5.

A group of Member States considered that fire detectors and alarms would be required for all methods (IC, IIC and IIIC) to new ships.

Another Member State considered that fixed carbon dioxide rooms with no or low risk of fire, service spaces with fewer risks of fire and remotely located service spaces on ships built under the Method IIIC did not need to be protected by a fixed fire detection and fire alarm system.

SSE 8, in general, agreed to require fire detection for control

stations but could not agree if this was necessary for CO2 rooms and similar spaces. As time did not permit discussions on how to handle service spaces, SSE 8 agreed to refer this matter to the CG.

### **Fire-fighting foams containing perfluorooctane sulfonic acid (PFOS)**

The IMO has started working on the prohibition of using perfluorooctane sulfonic acid (PFOS) for fire-fighting on board ships due to negative impacts on the environment.

SSE 8 agreed to ban the use of PFOS for new ships/craft through amendments to the SOLAS and the HSC Code but not MODU Code. SSE 8 forwarded the proposed amendments to MSC 106 for approval and subsequent adoption for entry into force on 1 January 2026. Existing ships are required to comply with the requirement by not later than the first survey after 1 January 2026.

SSE 8 agreed to establish safe disposal by disseminating information on the reception facility through a new GISIS module.

### **Duct penetration**

SSE 8 developed the unified interpretation as follows:

- The fire insulation required by regulation SOLAS II-2/9.7.3.1.2 should be provided only to the part of the duct and/or sleeve that is on the same side of the division being fire insulated, and be extended for a minimum of 450 mm along the duct and/or sleeve.
- For a Class B division, when a duct passing through a division is to be in accordance with SOLAS regulations II-2/9.3.2 and II-2/9.7.3.2, no clearance should be allowed between the duct and the division.

SSE 8 forwarded the above interpretations to MSC 106 for approval as an MSC circular.

### **Low-location lighting systems**

An NGO proposed to update references given in the FSS Code. However, SSE 8 agreed that the updates of the referenced ISO standard were substantial, therefore, would require a new work programme to review it.

### **Fire safety for the incinerators and waste stowage spaces**

MEPC 77 tasked SSE 8 to resolve the discrepancy between the *2014 Standard specification for shipboard incinerators* (resolution MEPC.244(66)) and SOLAS requirements. Subsequently, SSE 8 deleted fire safety requirements from resolution MEPC.244(66). Liberia pointed out that safety requirements for non-SOLAS ships were still needed but SSE 8 considered that such work would require a new work programme.

### **Postponement**

Due to time constraints, the following were postponed to

SSE 9 scheduled for 27 February – 3 March 2023.

- Fire testing requirements for pipe couplings
- Escape from steering gear space
- Updating MSC.1/Circ.1557 regarding Hazard classification
- Isolation valves of the Inert Gas systems
- Isolation of non-hazardous spaces
- Location of fire detector
- Portable fire extinguisher
- Testing of floor covering materials

## LIFTING APPLIANCE AND ANCHOR HANDLING WINCHES

SSE 7 had prepared draft SOLAS regulation II-1/3-13 on lifting appliances and anchor handling winches, and subsequent amendments to regulation II-1/2 on the new definitions. SSE 8 further worked on associated guidelines.

Regarding guidelines for anchor handling winches that are used for offshore operations. These covers:

- Design, construction and installation
- Testing
- Maintenance, inspection and operational testing
- Operations
- Loose gear
- inoperative winches and associated equipment/loose gear.

Key technical discussions at SSE 8 were:

- **Load Testing of anchor handling winches:** load testing of anchor handling winches was removed due to difficulties in undertaking the test.
- **Clarification of various terminologies:** Brake holding force, brake holding capacity, maximum line pull, static bollard pull, wire and chain stopper" for anchor handling winches were defined.
- **Responsible person:** Person appointed by the master or the company possessing the knowledge and experience required for the performance of duties specified in these Guidelines.
- **Control station:** The concept of multiple control stations was retained.
- **Emergency release:** To be arranged from the control station(s) and locally.

With regard to lifting appliances, SSE 8 updated the guidelines which was, in principle, approved by SSE 7.

- **Competent person:** a person possessing the knowledge and experience required for the performance of duties specified in these guidelines and acceptable as such to the Administration.
- **3-month window:** Explicit inclusion of three- month window was removed but it was understood that the intent, i.e. to bridge the gap between SOLAS and ILO 152 was

covered by "to the satisfaction of the Administration."

The requirements are not applicable to lifting appliances used in the offshore environment or to the launching arrangements for life-saving appliances. These guidelines will be approved by MSC 107 together with the final adoption of SOLAS regulations II-1/2 and II-1/3-13 for entry into force on 1 January 2026.

## MODEL TRAINING COURSE

The Sub-Committee reviewed the Model Course 3.03 on Survey of machinery installations.

IACS volunteered to take the role of the course developer.

## DIVING SUPPORT VESSELS

The IMO has been working to enhance diving safety by amending *the Code of safety for diving systems* (resolution A.831(19)) and *the Guidelines and specifications for hyperbaric evacuation systems* (resolution A.692(17)).

One of the key drivers of this development was to allow evacuation of divers in the saturation chamber if something goes wrong with the diving support vessel. One idea is to mandate the carriage of a lifeboat with a saturation chamber or require a hyperbaric evacuation unit to allow divers to escape in saturation.

Following the question raised by Liberia, SSE 8 re-drafted the text from the mandatory language to non-mandatory language, unless that is a quote from a mandatory requirement.

Further refinements, including the date for implementation, was left to the CG.

## OTHER UNIFIED INTERPRETATIONS

**Maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear (resolution MSC.402(96))**

There was a proposed interpretation of the resolution. The "Type" issue is the follow up of MSC 104 (original submission to MSC 103), i.e. the service suppliers are to be authorized per model of the hook or per type.

Due to time constraints, and noting substantial submissions to MSC 105, the chair only asked to defer the discussion to SSE 9 or task CG. SSE 8 agreed to defer the discussion to SSE 9.

## Postponement

Due to time constraints the following were postponed to SSE 9 scheduled for 27 February – 3 March 2023:

- Reliability of single essential propulsion components - electric machinery; and
- Supplementary lighting in all cabins of passenger ships

### ONSHORE POWER SUPPLY (OPS) SERVICE

SSE 7 had developed the draft interim guidelines for approval as an MSC circular, including pre-communication with terminals before arrival and compatibility assessment, as well as documents needed onboard. However, MSC 103 sent the matter back to SSE 8 for further technical issues to be clarified, pending the development of training requirements by the HTW Sub-Committee.

An NGO proposes corrections to the reference to the IEC standards. They also pointed out that there are constructional requirements thus not fit into the operational guidelines. Further, they proposed to consider a ship side breaker, in addition to the shore side breaker.

A Member State proposes additional safety procedures, such as setting interlock to prevent a reclosure of the circuit breaker from an erroneous operation during maintenance works and grounding the equipment.

In addition, there was an issue of the definition of “high voltage”, while the guidelines follow the definition of the IEC Standard, it contradicts against the recent revision to the STCW Convention.

Due to time constraints, SSE 8 postponed the discussion to SSE 9.

### WORK PROGRAMME

SSE 8 agreed to forward the following post biennium work item into the current biennium.

- Development of amendments to the LSA Code to revise the lowering speed of survival craft and rescue boats for cargo ships
- Development of amendments to the LSA Code for thermal performance of immersion suits.

### FURTHER INFORMATION

For further information please contact: [imo@lisr.com](mailto:imo@lisr.com)

## SSE 8 – Summary of Major Decisions

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### PROVISIONAL LIST OF DRAFT RESOLUTIONS AND CIRCULARS

- Draft amendments to the LSA Code regarding ventilation of survival craft
- Draft revised recommendation on testing of life-saving appliances (resolution MSC.81(70)) regarding ventilation of survival craft
- Draft amendments to the Interim guidelines on life-saving appliances and arrangements for ships operating in polar waters (MSC.1/Circ.1614)
- Draft MSC Circular on Guidelines for anchor handling winches
- Draft MSC Circular on Guidelines for lifting appliances
- Draft revision to MSC.1/Circ.1315 on Guidelines for the approval of fixed dry chemical powder fire-extinguishing systems for the protection of ships carrying liquefied gases in bulk
- Draft amendments to SOLAS chapter II-2 (Regulation 1 and 10) on the prohibition of PFOS
- Draft amendments to the 1994 and 2000 HSC Codes (Section 7.9) on the prohibition of PFOS
- Draft MSC Circular on unified interpretation of SOLAS Chapter II-2 on regulation II-2/9 regarding duct penetration
- Revised Standardized Life-saving Appliance Evaluation and Test Report Forms (survival craft) (MSC.1/Circ.1630), regarding standards for coated fabric material tests for inflatable liferaft for approval
- revisions to the 2014 Standard Specification for Shipboard Incinerators (resolution MEPC.244(66))

Note: the above circulars will be submitted to MSC 106 (November 2022), MSC 107 (June 2023) or MEPC 79 (December 2022) for approval/adoption and so are yet to be numbered.