

Expert Group on the evaluation of possible improvements of fire protection regulations for containerships

Work plan

Existing SOLAS requirements

The basic international consensus on fire protection in sea-going ships is expressed in SOLAS Regulation II-2/2.1 by five "Fire Safety Objectives":

1. prevent the occurrence of fire and explosion;
2. reduce the risk to life caused by fire;
3. reduce the risk of damage caused by fire to the ship, its cargo and the environment;
4. contain, control and suppress fire and explosion in the compartment of origin; and
5. provide adequate and readily accessible means of escape for passengers and crew.

In particular, the objective under point 4 has been given a specification by additional "Functional Requirements" listed in Regulation II-2/2.2:

1. division of the ship into main vertical and horizontal zones by thermal and structural boundaries;
2. separation of accommodation space from the remainder of the ship by thermal and structural boundaries;
3. restricted use of combustible materials;
4. detection of the fire in the zone of origin;
5. containment and extinction of any fire in the space of origin;
6. protection of means of escape and access for firefighting;
7. ready availability of fire extinguishing appliances; and
8. minimisation of possibility of ignition of flammable vapour.

Work plan

MSC 103 agreed a new output "to amend regulations in SOLAS chapter II-2 and the FSS Code to enhance provisions for early fire detection and effective control of fires in containerized cargoes stowed on and under deck of containerships".

The following questions should be understood as a work plan for the Expert Group. The questions follow the objectives as set out in SOLAS chapter II-2. Members of the Expert Group are invited to share their views on any or all of these questions taking into account a goal-based approach, efficiency and technological and economic feasibility:

- 1. What can be done to improve the fire detection in a container cargo under deck?**
- 2. What can be done to improve the fire detection in a container cargo on deck?**
- 3. What can be done to enable a more precise and quick fire localisation?**
- 4. What can be done to compensate the deficiencies of CO₂ with regard to smothering a fire in a container stow under deck?**
- 5. What can be done to improve the confinement of a fire in containers under deck to the particular cargo hold?**
- 6. What can be done to improve the confinement of a fire in containers on deck to the particular bay or section thereof?**

- 7. What can be done to improve active firefighting on deck bearing in mind reduced crew and local conditions?**
- 8. What can be done to protect vital ship structures under deck and on deck from excessive heat?**
- 9. What can be done to improve the protection of deck house and life-saving appliances?**

The questions focus on part 3 of the FSA methodology, i.e. risk control options. Part 1 (identification of hazards) and part 2 (risk analysis) have been addressed in documents MSC 102/21/7 and MSC 102/INF.3 as well as in a previous FSA (FP 54/INF.2). Part 4 (cost-benefit assessment) has been addressed in MSC 102/INF.2.

Based on input received to the list of questions, a draft paper addressing part 5 (recommendations for decision-making) will be developed for further discussion within in the Expert Group and with a view to submission to SSE 8.

Work on risk prevention and mitigation enhancement should be pursued simultaneously but is not the focus of this Expert Group. This parallel work stream is to be done in association with the CCC Sub-Committee as and when requested by the SSE Sub-Committee.

Timeline

MSC 103 agreed to include in the biennial agenda of the SSE Sub-Committee for 2022-2023 and the provisional agenda for SSE 8 an output on "Development of amendments to SOLAS chapter II-2 and the FSS Code concerning detection and control of fires in cargo holds and on the cargo deck of containerhips". SSE 8 is likely to be scheduled in February or March 2022. The deadline for the submission of bulky papers to SSE 8 will therefore likely be in late November.

The submission paper should therefore be aimed to be concluded and ready for submission by mid-November 2021. Against this backdrop, the following timeline for the drafting of the paper is envisioned:

1. Week commencing June 7, 2021:

Expert Group to be requested to submit views on the questions as outlined in this work plan by June 25.

2. Week commencing July 5, 2021:

IUMI to share initial draft paper with Expert Group. Invite comments from the Expert Group on the first draft by July 30.

3. Week commencing August 16, 2021:

IUMI to share revised draft with input from the Expert Group incorporated. Invite further comments by the Expert Group by September 10.

4. Week commencing Sept 27, 2021:

IUMI to circulate revised draft with a view to finalizing it to seek co-sponsorship.

5. October 2021:

Finalize the paper for submission to SSE 8 in the first half of November 2021.

4 June 2021