

IUMI Policy Agenda

4. Containership fire safety

Brief description

Firefighting capacity on board large containerships has long been considered insufficient. The problem has grown with the rapid increase in vessel size. Early work within the IMO dates back to a 2008 impact assessment which highlighted the specific vulnerability of container stacks on deck. As a result, the Maritime Safety Committee (MSC) approved in June 2013 new requirements under SOLAS II-2/10. Since 1 January 2016, all newly built vessels designed to carry five or more tiers of containers on or above the weather deck must be equipped with mobile water monitors and at least one water mist lance in addition to the existing protection arrangements. These measures represented a first regulatory step, yet concerns about the firefighting capability of the existing fleet remained. With container vessels continuing to grow in size and complexity, the challenge of insufficient firefighting arrangements became even more acute.

There is concern that many ships are unable to evidence compliance with SOLAS in respect of fire detection, containment and extinction. With fires being not only common but increasing in prevalence it is worth noting that insurers are discharged from liability if there is non-compliance with SOLAS. The situation also raises questions about the seaworthiness of vessels, the view of classification societies and crew safety.

The contents of a container must be known if it is to be transported safely, but misdeclaration is a recurring safety problem. This applies equally to road, rail, brown and blue water transport. Containers often contain a wide range of hazardous and toxic substances. It is reported that approximately 20% of containers in transportation are misdeclared. An analysis from the Cargo Incident Notification System (CINS) shows that just over a quarter of the incidents where causation was detected were attributable to cargo being misdeclared. This may lead to insufficient handling of the container, and worst case an incorrect firefighting strategy that may increase the danger of combustion of the goods in the container. The World Shipping Council has launched the Cargo Safety Program (CSP) to address the issue of misdeclared cargoes before they get onboard container vessels. The National Cargo Bureau (NCB) has been tasked with implementing the CSP using AI technology. The matter is also considered by the IMO's CCC Sub-Committee.

In September 2017, IUMI published a position paper recommending that authorities, classification societies, and industry stakeholders explore further improvements in fire detection, protection, and suppression systems. IUMI joined forces with Germany, the

Bahamas, BIMCO, and CESA to submit a proposal to MSC 102. This initiated a new regulatory stream under the Sub-Committee on Ship Systems and Equipment (SSE) to develop amendments to SOLAS chapter II-2 and the Fire Safety Systems (FSS) Code. The aim is to enhance early detection and effective control of fires in containerized cargo, both on deck and in cargo holds.

To structure this process, IUMI set up a group of experts who drafted a roadmap for SOLAS amendments. In November 2021, six flag States together with IUMI, BIMCO, and IACS presented an initial gap analysis to the SSE. In parallel, the European Maritime Safety Agency (EMSA) launched the CARGOSAFE study, designed as a Formal Safety Assessment (FSA). It systematically addressed hazard identification, risk analysis, possible risk control options, and cost-effectiveness. The CARGOSAFE final report was published in March 2023.

Building on these findings, possible amendments and risk control options were placed on the agenda of SSE 10 in March 2024. IUMI, together with France and BIMCO, submitted document SSE 10/10/2, advocating for the most impactful measures identified by CARGOSAFE. These included the installation of linear heat detection systems capable of identifying temperature rises inside individual containers, as well as fixed water monitors mounted on the superstructure to improve reach and effectiveness of firefighting streams. Both measures are seen as decisive improvements compared to the current reliance on mobile equipment.

The IMO Fire Protection Correspondence Group continues its work to amend SOLAS regulations. IUMI actively participates and supports stronger requirements, particularly for newbuilds to include not only mobile water monitors, but fixed water monitors as well, the inclusion of video-based fire detection on deck, and the deployment of heat detection systems under deck. A number of detailed SOLAS amendments have been discussed in detail. At SSE 11 in February 2025 where IUMI advocated for mandatory requirements for fixed water monitors as well as improved detection methods such as video fire detection (on deck) and linear heat detection (under deck). Various matters such as guidelines for water mist lances, the requirements for the mandatory carriage of infrared imagers, and the installations of fixed water monitors were discussed in detail, but no final conclusions could be reached yet. The deliberations continued in a Correspondence Group and at SSE 12 in March 2026. Two items were completed during this session: Guidelines for water mist lances and requirements for portable IR cameras. Discussions on fire detection and extinguishing systems will continue in a Correspondence Group which will report to SSE 13 in March 2027.

During the 11th session of the SSE (2025), the Sub-Committee agreed to delay the regulatory process and have all amendments related to improved containership fire safety approved as one “package”. The original target completion year was 2025. For this timeline, amendments would have come into force on 1 January 2028, provided that they had been adopted before 1 July 2026. This has now been shifted to the SOLAS



amendment cycle 2032, i.e. all agreed amendments will come into force on 1 January 2032, provided they will be adopted before 1 July 2030.

IUMI will:

- Support a holistic approach to preventing and mitigating fires starting in the cargo on board container vessels.
- Support measures that improve the monitoring of containers and their contents.
- Support internationally harmonized legislation and national regulations based on the CTU Code.
- Monitor and support measures to ensure the structural safety of large container vessels.
- Support SOLAS amendments to improve fire safety.
- Support the NCB recommendations and the World Shipping Council's Cargo Safety Program to address the carriage of undeclared, mis-declared and other non-compliant dangerous goods.