

Container ship fires putting lives at risk

World Shipping Council, September 2023

Dangerous goods remain a threat to safety

The ever-growing frequency and magnitude of containership fire incidents related to the carriage of dangerous goods in the past years is of major concern to the liner sector as represented by the World Shipping Council (WSC).

The people in the global supply network strive day and night, at sea and on land, to keep us all fed, clothed and able to work. They keep the global economy going and deserve to be able to do their jobs without risking their life and health.

Yet still today, despite comprehensive and clear international and national regulations on the transport of dangerous goods, we are facing a persistent issue with dangerous cargo that shippers have not declared, not packed in a safe way or that have been inaccurately declared and marked, causing fires and explosions, hurting and killing vessel crew and transportation staff.

The industry has a responsibility to do our utmost to prevent accidents and injury, and we are exploring ways to reduce the number of incidents, injuries and fatalities. This problem has a tangible and negative impact not only on the safety of crew, but also the marine environment, cargoes and vessels. As such, it poses a significant impediment to WSC Members' implementation of safety standards and duties owed to seafarers, customers and society and at large.



Photo courtesy of NDTV

Fires on containerships are increasing

The last decade has seen an increase in incidents involving dangerous goods transport, with a worrying number involving casualties and total losses. The [2023 Allianz Safety and Shipping Review](#) reported that there have been over 64 reported fires on containerships alone over the past five years.

In 2022, the total number of reported shipping casualties or incidents increased, with incidents caused by fire increasing by more than 17% compared to the previous year.

[Allianz](#) reports that “The cause of many cargo fires can be attributed to mis-declared dangerous goods, such as chemicals, batteries and charcoal. Failure to properly declare, document and pack hazardous cargo can result in containers stowed incorrectly or hampering of firefighting efforts.”

Containers failing cargo inspection at alarmingly high rates

The International Maritime Organization (IMO) is the specialized agency of the United Nations tasked with considering matters of regulation of containerized dangerous goods and results of container inspection programs¹.

The latest results of national authority container inspection programs reported by IMO Member States to IMO detail serious deficiencies referring to documentation, placarding and marking of CTUs, marking and labelling of packages, stowage inside the Cargo Transport Units (CTUs), segregation of cargo and serious structural deficiencies among others. In inspections carried out between 2011 and 2021, an average of 11.81% of

containers were found to have deficienciesⁱⁱ. With more than 250 million containers crossing the seas every year, that means more than 28 million containers with safety deficiencies.

These rates are based on reports from a small number of Member States to IMO; in 2022 only four countries reported container inspection results and in 2021 only five out of the 175 Member States. Industry experience points to rates that are significantly higher. In 2019, an industry initiative reported to CCC 6 that industry container inspections showed a 59.5% deficiency rate on inspected containers, calling for strengthening vigilance, visibility and compliance with industry and regulatory standards for containerized goods within the maritime supply chain.ⁱⁱⁱ

The gravity of this situation is also recorded in the findings of multiple investigation reports on containership fire incidents published by national authorities. These identify deficiencies with containerized dangerous goods as a contributing cause of fire in the past years. Importantly, not all incidents of cargo-related containership fires lead to an investigation and as such the full picture is believed to be even worse.

The above reflects a present, significant and disproportionate risk to the safety of crews, the marine environment, cargoes and vessels. It is an untenable situation which prevents carriers from being able to provide the desired level of care and safety to seafarers, customers and society, and industry is actively seeking resolution through various preventive actions and initiatives.

A common dangerous goods approach to safeguard our people, our oceans, our cargo and our assets.

The continued safety challenges make it clear that the shipping industry must take additional action to protect the lives of their people, the environment, and their customers' cargo. Many WSC members today operate sophisticated screening programs to detect and prevent the loading of non-compliant dangerous goods. However, because shippers have so many carrier choices, a non-compliant cargo that has been rejected by one carrier might be booked with another carrier.

In addition, the widespread use of Vessel Sharing Agreements (VSAs) means that each carrier will wish to be confident of the safety of cargoes booked onto its vessels by VSA partners. These factors all point to the need for a common industry approach to screening dangerous goods cargoes so that a minimum level of screening and appropriate follow-up will be applied to every booking. Even if most shippers follow the rules, the exceptions can be deadly.

To this end WSC has together with members developed a new industry process for cargo screening and inspections to be used voluntarily by each carrier - the Cargo Safety Program. The Cargo Safety Program will rely on a digital solution that integrates a Common Screening Tool, Verified Shipper Database, and a Database of Approved Container Inspection Companies. The digital tool will be provided and operated by an independent third-party vendor.

The core functionality of the system will be to screen booking information against a key word library and risk algorithm to identify high-risk bookings for further investigation and/or inspection. Participating carriers will work with the vendor to continuously improve this system by sharing dangerous goods keywords and inspection results.

When widely adopted by container carriers, this common system should significantly reduce the risk of incidents and containership fires due to dangerous goods that have not been properly packed, declared or marked by shippers. At the same time, it will facilitate the transportation of dangerous goods that are properly packed and declared in accordance with national and international regulations.



ⁱ See IMO circular MSC.1/Circ.1649 'Guidelines for the implementation of the inspection programmes for cargo transport units'

ⁱⁱ See IMO documents [CCC 8/INF.2](#), [CCC 7/INF.2/Add.1](#), [CCC 7/INF.2](#), [CCC 6/INF.2](#), [CCC 5/INF.2](#), [CCC 4/INF.4/Rev.1](#), [CCC 3/INF.26](#), [CCC 2/INF.25](#), [CCC 1/INF.28/Corr.1](#), [DSC 18/INF.22](#) and [DSC 17/13/8/Rev.1](#) respectively.

ⁱⁱⁱ See IMO document CCC 6/14, paragraph 10.3.2.