

INTRODUCTION

On 4 March 2022 a fire broke out in the terminal at the quay in San Pedro Port at Long Beach, USA. The United States Coast Guard reported that the fire started in a container. The bill of lading for the container stated that the cargo inside was 'synthetic resins,' a non-hazardous material. However, the subsequent investigation revealed that the cargo was misdeclared and the contents of the container were used lithium-ion batteries, which are classed as hazardous materials with a high risk of fire.

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According to the United Nations Conference on Trade and Development (UNCTAD), the throughput of global containers was around 815.6 million TEU in 2020². Approximately 10% of all transported containers loaded onboard ships contained dangerous cargo.

Container vessels are exposed to the risk of container fires as usually the containers are stuffed in advance, with the carriers having limited or no information about the contents when they receive them for shipment on board. The carrier may sometimes impose a higher surcharge for transporting hazardous cargo, and impose more stringent rules for transportation or may even prohibit transportation of certain cargo on board their vessels. This may discourage those shipping the containers to provide an accurate description of the cargo inside the containers.

The carriers are trying to prevent cargo being misdeclared by introducing more stringent rules and by investing in technology. They are also encouraging the drafting of industry-wide best practices to tackle the risks created by misdeclaration of cargo in containers.

MISDECLARATION OF CARGOES IN CONTAINERS CONTINUED

RISKS ASSOCIATED WITH MISDECLARED CARGO

The carrier is relying on the cargo to be correctly declared in order to be certain what cargo is actually being carried inside the container. In cases where a container catches fire, it is also essential for the carrier and the crew on board to know exactly what the container is carrying so the right firefighting strategy can be implemented.

The situation is often made more complicated by the fact that some of the cargoes have similar shipping names, trade names or synonyms. A common example is 'calcium hypochlorite' which is normally used to treat swimming pools or drinking water, and has stringent regulations imposed when it is loaded on board for shipment. The cargo has been misdeclared using trade synonyms not listed by the IMDG code such as 'whitening agent', 'white or yellowish chemical solid', 'chlorinated lime', 'bleaching powder' or 'calcium chloride'.

Searches in the International Maritime Dangerous Goods (IMDG) Code for the term 'calcium hypochlorite' identify six different United Nations (UN) numbers, where each one matches a slightly different set of requirements.

Another issue that results in cargoes being misdeclared is that some shippers may not be aware of the provisions of the IMDG Code or they might purposely take advantage of the special provisions that exempt the testing of certain goods when transporting them in a particular physical form.

PREVENTIVE MEASURES

The carrier should have in place a comprehensive set of due diligence and Know Your Costumer (KYC) procedures, with the objective of thoroughly assessing the shipper in order to mitigate the risk of accepting cargo from shippers who may misdeclare or undeclare cargo.

Visual inspection is difficult and continues to be an obstacle for the carrier due to the fact that the construction of a standard steel container prevents the carrier from seeing the cargo contained inside. It would not be practical for the carrier to check or open every single container to verify its contents and it would require specially trained personnel to be able to verify whether the cargo actually matches the declared description, especially for cargo booked at the last minute.

Those dealing with IMDG bookings and with dangerous goods must be trained in order to provide them with the proper skillset that, together with experience, can enable them to better identify some of the red flags commonly seen when a container cargo is identified as being potentially misdeclared.

Another approach is to use technology to tackle the cargo misdeclaration. Software can be used to scan bookings and identify certain key words. A key word search would highlight suspicious containers and then these containers can be subjected to further investigation to see whether the actual cargo matches the shipper's booking declaration. This technology is being continuously developed and is becoming more sophisticated as the use of artificial intelligence (AI) is now being implemented by some carriers to try and identify undeclared cargo.

SOME OF THE RED FLAGS THAT MAY INDICATE MISDECLARED DG CARGO INCLUDE:

- DOCUMENTATION IS INCOMPLETE, FOR INSTANCE IF THERE IS NO PACKING SURVEY REPORT
- SHIPPING NAME SOUNDS SIMILAR TO DANGEROUS CARGO, TRADE NAMES OR SYNONYMS
- LAST MINUTE BOOKINGS OR AMENDMENTS TO CURRENT BOOKINGS
- THERE IS NO HARMONISED SYSTEM (HS) CODE, OR IT IS A FAKE CODE SIMILAR TO A DANGEROUS CARGO (E.G. STARTS WITH 2828)

In 2018, Safety4Sea published an article in which the Lloyd's Register Foundation advocated the establishment of Maritime Blockchain Labs³ (MBL) to build an ecosystem within the maritime sector. There would be development of an industrial standard to improve collaboration between industry actors and blockchain practitioners to share best practices, knowledge and solutions, using a prototype with ledger database technology. This would involve various stakeholders and would lead to better transparency and accountability which could eventually be used to help track dangerous goods, using smart containers and radio interface level.

The Cargo Incident Notification System (CINS) issued their 'Safety Considerations for Ship Operators Related to Risk-Based Stowage of Dangerous Goods on Containerships' published in 2019 which carriers may use as a reference to help them improve safety when a container catches fire on board.

CONCLUSION

Due to the nature of a standard container, its contents are not visible and so they cannot be easily verified or inspected. Therefore, the shipping of containers is very much a question of trust between the carrier and the shipper. The risk of misdeclaration can be mitigated by having in place comprehensive KYC and training procedures, combined with cargo identification software.

In addition, it is always important for the carrier to engage with the shippers or forwarding agents to stress the importance of proper cargo declaration and follow the advice set out above to mitigate the risk of container fires.

When all interested stakeholders cooperate to improve the traceability of the cargo and minimise the risk of misdeclaration, this will reduce the burden for our Members and reduce the risks of expensive claims.

 $^{^3\,\}mathrm{Safety4Sea}$ published Lloyd's Register Foundation funding Blockchain Labs for Open Collaboration