

Dangerous Cargo - Flow

Organization Name: Maersk

Overview: On 6 March 2018, a major fire broke out in one of the forward cargo holds of Maersk Honam while the vessel was in the Arabian Sea about 900 nautical miles southeast of Salalah, en route from Singapore to Suez with a cargo of 7,860 containers and a crew of 27. We lost 5 colleagues in the dreadful incident. September 2018, following the fatal Maersk Honam fire that claimed the lives of five seafarers, Danish industry major Maersk implemented new guidelines on stowage of dangerous goods to improve safety across its containership fleet of over 750 ships. Maersk developed a new set of principles called Risk Based Dangerous Goods Stowage, and called on the industry stakeholders to conduct a comprehensive Hazard Identification study in order to validate them. The new guidelines have reviewed over 3,000 of United Nations (UN) numbers of hazardous materials, as well as different containership designs, resulting in the defining of six different risk zones. All these steps were taken though it was not confirmed that Dangerous Cargo was the cause of the fire.

Current Challenges: 400 - 500 words

The mitigation doesn't end only by resolving this issue of misclassification from a data point of view. We would like to identify smarter methods of accurately classifying dangerous cargo. While most ports in the world have a scan for SNM (Nuclear Materials) radioactive content. There is no scan or check for non-radioactive yet unstable dangerous cargo.

Some dangerous goods are missed from the radar owing to the sheer number of ways they can be described, for Example there are 14 alternative descriptions of calcium hypochlorite used in shipping documents, including bleaching powder, Caporit, CCH, chlorinated lime, and lime chloride. Calcium hypochlorite is suspected as the cause of the fire on board the 6,350-TEU container ship APL Austria off the coast of South Africa in February 2017. There is an average of a container ship fire every 60 days*.

Based on the number of hazardous cargoes that had been wrongly declared to carrier Hapag-Lloyd through its Cargo Patrol system, Storrs-Fox estimates around 150,000 * boxes a year are ticking time bombs.

Business Requirements: 400 - 500 words

- Define a robust process of Physical scanning and classification of goods as dangerous cargo
- Use data in shipping description and physical as combination to identify dangerous cargo

Points to Account:

- Only 5 percent* of the containers shipped to U.S. ports are physically inspected, and that number is even lower in Europe and Asian countries.
- Physical inspection of containers is not easy or feasible option unless there is high level suspicion or threat to check a container. In most cases a container comes to a carrier sealed by the customer. Breaking into a container in case of false alarms will create huge customer dissatisfaction

*Source - https://www.joc.com/regulation-policy/transportation-regulations/international-transportation-regulations/classification-confusion-hampers-dangerous-cargo-declaration_20190208.html