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Implementation of guidelines for risk assesment in maritime transportation

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DESCRIPTION

Risk assessment involves the process of identifying hazards and potential causes that tend to cause harm or damage to personnel, machinery and the environment. It helps to determine appropriate ways to remove the hazards or reduce the risk level if hazards cannot be eliminated. Hazards identification requires imagining and visualizing the worst case scenarios. While risk assessment is the overall process, risk analysis is an analytical process and one of the steps in risk assessment that estimates the probabilities and expected consequences for the determined risks. It helps to prioritise and define high risks. Risk evaluation helps in understanding the significance of risks in relation to other risks by comparing against given risk criteria. It involves decision making about its consequences and how to manage the risks. It is a reaction based approach to risk. It means actions are taken only after the occurrence of events. Improper safety culture, inaccurate risk assessment and poor decision-making capabilities result in such type of response.

It focuses on anticipating and eliminating the events and problems before they lead to catastrophic accidents. The proactive approach involves strict compliance with rules and regulations, clearly identifying potential hazards, analyzing them well in advance and practicing proper safety culture. Maritime transport is one of the oldest modes of transport in the world to carry passengers, cargo, oil and goods across the globe. As per the International Chamber of Shipping, around 11 billion tons of goods are transported globally each year by sea route. The maritime industry has excellent supply chains for delivering goods from producers to consumers just in time. It is economical and has a major contribution to the world economy. It provides billions of dollars per annum and helps in employing lakhs of people globally. With technological change, the shipping industry is becoming highly efficient, economical and known for its swift mode of transport.

Compared to earlier days, with the advancements of technology and automation mechanisms installed in ships, the frequency of accidents is greatly reduced. Marine transport has become safer. But the possibility of any untoward incident on board the ship cannot be ruled out. In contrast to road, rail or aircraft accidents, marine accidents can cause damage to human beings, marine animals, the environment and the ecosystem.

The maritime domain faces several types of accidents. These accidents are not the result of one instantaneous cause, but the result of a series of factors networked and intermingled through complex relations. The ship may collide with the other ship on the course or anchored one. Collision may be with an iceberg, port or even with an offshore drilling platform.

It may cause an oil spill, damage to ship structure, human losses, negative impact on the marine environment, permanent damage to the ship and may even block the ship's traffic. In case of collision, chances of loss of life are high. When a ship in a collision carries harmful products like oil, chemicals or any other harmful material, the impact may endanger human life, marine life and affect the environment.

CONCLUSION

Large sailing ships may capsize even if it heels a small angle and not able to right themselves to regain their proper position. A ship may turn on its side or even become upside down in the water. The ship may carry inflammable compounds like oil, chemical, cargo etc. The chemicals or other material on board the ship may ignite and eventually lead to an explosion. Fire may also originate from the engine room and spread to other areas. This highlights the importance of ascertaining root causes and causal factors to prevent accidents. Damages are also caused to ships by natural hazards such as tsunami-genic earthquakes, super cyclones, hurricanes and coastal floods which are considered non-traditional risks.