CURRENT MARITIME SAFETY ISSUES

Welcome to HAZARD Final Conference
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Maritime safety affects everyone, from blue collar factory workers and school children, to journalists and company chief executives.

The global population depends on a safe and efficient shipping trade network for modern day living to continue unchecked. In the 100 years since the loss of the RMS Titanic, the maritime industry has worked steadily to improve safety performance so that almost 30 million tonnes of cargo and more than 55,000 cruise passengers and 1.1 million passengers in EU waters that travel by ship every day do so safely and efficiently in the vast majority of cases.
Ship sizes have increased significantly, dwarfing the Titanic in comparison.

The largest modern container ships, such as Maersk’s new Triple-E class, pose challenges for insurers due to their sheer scale and value.

Other ships are pushing the design envelope, breaking new ground in terms of design challenges which has led to concerns about structural integrity.
Comparing size of Titanic with other ships (gross tonnage)

- **Knock Nevis**: 260,851 tonnes
- **Emma Maersk**: 170,974 tonnes
- **Valemmax**: 198,380 tonnes
- **Queen Mary 2**: 171,000 tonnes
- **Titanic**: 46,328 tonnes
Cruise ships: Despite the strong passenger safety record of the cruise industry, the modern trend towards ultra-large cruise ships, carrying over 6,000 passengers, poses new challenges, especially in terms of evacuation and rescue in remote environments.

The International Maritime Organisation (IMO) has introduced regulations addressing such risks, including proactive risk management with improved fire safety systems and a focus on the need for such vessels to be their ‘own best lifeboat’ so that, in the event of a casualty, persons can stay safely on board, as the ship proceeds to port.
Training and labor: with increased cost pressure, many ship-owners look to source crews from emerging economies due to lower wage demands.

Despite IMO attention through international standards, training regimes and assessment are not consistent and may lead to variations in crew and officer competence.
Crewing levels in a competitive industry continue to pose risks, despite the greatly improved efficiency of modern vessels, and may compromise margins of safety.

Some commentators regard minimum crewing levels as too low, and point out they do not allow for the inevitable extra tasks that 24 hour operations require – with ‘human factor’ risks such as fatigue being significant causes of accidents.
Inadequate risk management is identified as a key challenge which can be addressed through improved safety management systems and processes.
Piracy continues to threaten shipping, especially off Somalia and the Horn of Africa where 28 ships were attacked in 2011, with attacks also being seen in other regions (such as West Africa).

The economic impact of piracy was estimated to be around $7 billion in 2011.
Language barriers are also cited as potential risks, given the dependence on English as the ‘language of the seas’.

With increasingly multi-national crews, concern has been raised about communication in an emergency, or even misunderstandings in routine operations.
Arctic and Polar waters: climate change is opening up access to previously impassable seaways, but the development of new routes, such as the North East Passage, pose great challenges in terms of ice navigation, environmental concerns, and design and construction demands, as well as emergency procedures in extremely hostile environments.
Poor enforcement & coordination: with a complex regulatory environment, coordination of such regulations needs to be improved. Despite an alignment of objectives, individual enforcement bodies do not always coordinate actions, nor is it easy to enforce responsibility in the event of an incident.
Fire remains a major on-board risk especially in ‘RoRo’ ferries (with relatively open decking) and also on passenger ships with increased ‘hotel’ services and large passenger numbers.
MARITIME SAFETY – KEY FACTS

Summary of the Cyber Threats in the Maritime

Cyber Threats in the Maritime may lead to:
- Concealing ship movements or cargo data by cracking related systems/databases
- Distortion of critical infrastructure architecture (i.e., port automated cargo systems or off-shore energy producing facilities)
- Losing information sovereignty on ship position and distance to ports/coast guard/special vessels
- Disruption of communication, traffic and navigational systems
- Infiltration of key personnel (e.g., data on Inspectors) on ships by organized crime or other actors
- Distortion of (e-)navigational data leading to accidents, hijackings and environmental pollution
- Distortion maritime reports related to accidents leading to manipulated information on accidents
- Conceal the point of origin (previous ports) of the vessel
- Maritime attacks (organized crime, terrorism, piracy) as well as information misuse by peer business competitors (i.e., business espionage, influencing price fluctuations, accessing proprietary company data as well as details of vessel schedules)
REPORTED OCCURRENCES 2011 -2016

Total per year

Severity of occurrences

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