

# Abstract

**Hossam Eldin H Abd Elhakeem**

## **CHALLENGES OF EMERGENCY EVACUATION ON BOARD PASSENGER VESSELS (Case Study: M/V Costa Concordia)**

Abstract The international community has shown great interest in the safety of passenger ships since the disaster of the English giant passenger ship 'Titanic' in the early twentieth century, which strongly called for the need to develop a unified international framework to regulate the standards and regulations related to the safety of passenger ships, Those standards are still in the ongoing development and modification to keep up with the steadily increasing in passenger ships capacity which presented new challenge to the emergency evacuation process. Though Passenger ship disaster still happen and passengers still fail to evacuate the ships, This matter causes real concern and requires a stop to wonder about the adequacy and effectiveness of the current international standards and level of its coverage to the needs and challenges of the evacuation process. This research aims to determine the extent of coverage of the current international legislation issued by IMO, and related factors and challenges affecting the effectiveness of the evacuation process, through case studying and analyzing the factors that led to the failure in of the emergency evacuation of passengers at one of the worst passenger ship accidents in the twenty-first century. Also this research provides study and analysis of the challenges and various factors facing any successful evacuation process in general, starting from the ship performance, through the conditions associated with the process of evacuation and the nature of the emergency situation faced by the ship, and finally the role of the human element represented by the crew and passengers, in order to determine probable development of existing legislation to ensure the coverage of all challenges that face the process of emergency evacuation of passenger ships. Also the study aims to discuss and analyze the role of the current technological development and its impact on improving the efficiency and effectiveness of the evacuation process, such as the use of modern technology to track and locate the passengers inside the ship electronically, which could make the future of passenger ships safer. The research concludes that despite many positive indicators, the real problem is that legislation and modern technology will not become effective without a high degrees rehabilitation and training of the human element involved in the management and execution of the comprehensive and effective contingency plans, it is certain that the emergency situations onboard passenger ships will not stop happening so ships should be prepared for them based on the worst possibilities in order to not convert these cases to catastrophic disasters resulting in many casualties.