

# Conference: Marine HSE





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#### Introduction

Marine operations include the movement, berthing, and un-berthing of ships and other marine crafts within the limits and approaches of the port authority. Ships are the main means of transport of various liquids and gases, some of which are hazardous and extremely dangerous, if mishandled, to port workers as well as marine flora and fauna. Thus, vessels carrying dangerous material need to be effectively managed to ensure safety. Marine safety involves the prevention of damage and pollution to the marine environment through strict rules, restrictions and legislations.

Port authorities need to follow certain practices and procedures during port operations to maintain marine safety. However, marine safety during port operations does not apply to port authorities and organizations alone but also involves contractors, vendors and other authorized officers working in and around a port.

A safety management system, including a safety policy, is ideal to present uniform guidelines and standards of work and practices during port operations. A safety management system is based upon a formal risk assessment of marine activities during port operations. Successful safety management is possible through effective safety policies, effective management structures, planned and systematic approaches to implementation of the systems, performance measurement against standards and experiential learning and associated amendments. Marine safety has a huge impact on the environment and can help facilitate commerce; it is closely related to environmental conservation. Human error and natural failure are the two main causes of marine accidents. Thus, one of the major contributors and influencers of marine safety around ports is training and education of port operations. Personnel to meet safety standards. Risks to marine safety are reduced by more than half on education and training of personnel carrying out port operations.

Marine safety data analysis is very important to prioritize prevention initiatives. Today, there are numerous conventions and guidelines setting boundaries of safety and efficiency at ports. Technology, too, has played a major role in improving marine safety. This program will empower you with knowledge and information regarding best practices to maintain marine safety during port operations. It will provide you all necessary details to ensure that you maintain a safe work environment and help colleagues do so. The program will help you understand, in detail, how port operations and certain practices can impact marine safety, pollution and the health and well-being on marine flora and fauna.

Given the current focus and importance of marine safety and preservation of the marine environment, this program will train and equip you to work in accordance with universal standards set by renowned organizations working towards marine safety. Overall, this program will build your competence and provide you the confidence, experience and exposure to confirm that your respective organization is compliant with all practices and standards.

#### **Course Objectives**

The main objective of this course is to empower port operations personnel with:

- complete information and knowledge of marine safety and its relation to port operations
- the required awareness of best practices during port operations to maintain marine safety
- knowledge about universally accepted standards and guidelines related to marine safety



- the required confidence and experience to drive onells organization towards implementing safety management tools, systems, and policies to ensure marine safety
- the required exposure and experience to handle incidents that could pose harm and damage to marine safety
- the skillset and capability to conduct random internal audits to check that port operations are running as per the required standards, inadvertently supporting marine safety
- the necessary foresight to predict or identify possible opportunities for marine accidents and hazards that could impact marine safety, and take timely action to combat these
- the skillset and capability to undertake higher roles and responsibilities successfully, thus securing onells career progression within the organization

#### **Targeted Audience**

- Senior port authorities and officers who need to understand the importance of marine safety, its relation to port operations and the need for training and education of port operations. personnel
- Port operations personnel who conduct end-to-end operations daily, working on heavy machinery and complicated systems
- Legal officers and advisors who would be involved in legal issues in the event of an accident that affects the marine environment and compromises on marine safety
- Human resource professionals and policymakers who need to drive adherence to safety through policies and guidelines
- Internal and external auditors who would need to check and confirm compliance with internally set standards from time to time
- External vendors and contractors who also play some part and are involved in some part of marine operations
- Any other individual who would like to know more about port operations and their impact on marine safety

# **Course Outline**

# Unit 1: Importance of Marine Safety

- Protection from loss of life
- Protection against economic losses
- Protection of the environment/pollution prevention
- Maintenance of a good national reputation greater economic development
- Increase cooperation among regions, countries and continents increased trade and tourism

#### Unit 2:

#### Components of Marine Safety

- · Aids to navigation
- Seafarers
- Oil spill response system
- Vessel traffic system

#### Types of Port Marine Operations

- Safe anchorage considering weather/wind
- Managing and marking wrecks
- Positioning and maintaining aids to navigation



- Dredging and other civil engineering work
- Conducting surveys and disseminating results

# Unit 3: Components of Port Marine Safety

- Pollution prevention
- Pollution Investigation
- Port patrols/Surveillance
- Drills and exercises
- Emergency and contingency planning
- Container and facility inspections
- Cargo loading supervision

## Unit 4:

## Ways to Maintain Marine Safety:

- Training
- Policies
- Audits
- Technology
- Performance assessment

#### Key Elements of Successful Safety Management

- Effective safety policies
- Effective management structure
- Planned and systematic implementation approach
- Performance measurement against standards
- Experiential learning and application

#### Unit 5:

#### Features/Gist of an Ideal Safety Policy

- · Safe and efficient organisational asset management
- Discharge of duties and powers
- Maintenance of marine equipment to agreed standards
- Recruitment and training of operational staff to agreed competence levels
- Appropriate training for emergencies and contingencies

#### Steps in Risk Assessment as Part of Ensuring Safety

- · Problem identification, scoping and risk assessment design
- Hazard identification
- Risk analysis
- Assessment of risk control measures
- Identification of new risk control measures