MERCURY

Rigging and Lifting Operations

9 – 13 August 2027
Dar es Salaam (Tanzania)



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Ref: 16308_1070227 **Date:** 9 – 13 August 2027 **Location:** Dar es Salaam (Tanzania) **Fees:** 5300 Euro

Introduction:

Rigging and lifting operations are critical tasks in construction, oil and gas, maritime, and heavy industries, where safety and precision are paramount. This course provides participants with a solid theoretical foundation for safe and efficient rigging practices. It addresses the principles of load dynamics, selecting lifting equipment, inspection, and hazard control. They will learn how to interpret lifting plans, assess risk factors, and comply with international safety regulations.

The Rigging and Lifting Operations program emphasizes preventive measures to prevent accidents and equipment damage, integrating real-world case studies to provide practical insights. Through structured theoretical modules, learners will gain the knowledge necessary to make informed and compliant decisions in lifting operations. It ensures that participants understand their role and responsibilities in executing safe and effective rigging and lifting tasks.

Targeted Groups:

This Rigging and Lifting Operations training targets professionals seeking specialized knowledge and skills:

- Riggers and lifting technicians.
- Safety officers and supervisors.
- Construction and industrial project managers.
- Maintenance and inspection personnel.
- Oil, gas, and maritime operations staff.
- Heavy machinery and crane operators.
- Engineering and logistics coordinators.
- Anyone involved in planning or overseeing lifting operations.

Targeted Competencies:

Participants will gain the following competencies during the Rigging and Lifting Operations program:

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- Ability to plan and supervise lifting operations safely.
- Competence in selecting and inspecting rigging equipment.
- Skill in risk assessment and hazard mitigation.
- Knowledge of regulatory and compliance frameworks.
- Capability to read and implement lifting plans.
- Effective communication with lifting teams.
- Decision-making in abnormal or emergency conditions.
- Leadership in promoting workplace safety culture.
- Analytical skills for reviewing incident scenarios.

Course Objectives:

Participants will achieve the following objectives by completing the Rigging and Lifting Operations course:

- Understand fundamental principles of rigging and lifting operations.
- Identify types, functions, and safe use of lifting equipment.
- Analyze load dynamics and determine the center of gravity.
- Evaluate and control hazards associated with lifting tasks.
- Interpret and follow lifting plans and safety standards to ensure the implementation of safe lifting practices.
- Conduct thorough equipment inspections and regular maintenance checks.
- Apply risk assessment techniques before lifting operations.
- Demonstrate understanding of hand signals and communication protocols.
- Ensure compliance with international and local safety regulations.
- Develop decision-making skills for emergency response scenarios.
- Plan and organize lifting operations effectively.
- Enhance leadership and supervisory skills for team safety.
- Promote a safety culture in rigging and lifting tasks.
- Evaluate case studies and apply the lessons to real-world workplace situations.
- Improve documentation and reporting of lifting activities.

Studying Scenarios:

In this Rigging and Lifting Operations training, participants will develop their skills through the analysis of the following scenarios:

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- Planning a multi-crane lift for oversized equipment.
- Identifying hazards in offshore rigging operations.
- Assessing root causes of lifting-related accidents.
- Evaluating proper rigging gear for a heavy load.
- Coordinating communication between crane operators and ground crew.
- Managing weather-related risks in lifting tasks.
- Implementing corrective actions after failed rigging operations.
- Reviewing case studies of industry best practices.
- Simulating emergency response during a rigging failure.

Course Content:

Unit 1: Fundamentals of Rigging and Lifting Operations:

- Introduction to rigging and lifting principles.
- Understanding load dynamics and forces.
- Types and characteristics of lifting equipment.
- Importance of the Load Center of Gravity.
- Factors affecting lifting safety.
- Regulatory and compliance requirements.
- Roles and responsibilities of rigging teams.
- Overview of industry best practices.
- Case studies on rigging incidents.

Unit 2: Equipment Selection and Inspection:

- Types of rigging equipment: slings, shackles, hooks.
- Criteria for selecting proper lifting devices.
- Inspection procedures for slings and chains.
- Maintenance and storage of lifting gear.
- Signs of wear, damage, and rejection criteria.
- Load testing and certification requirements.
- Documentation for equipment inspection.
- Practical examples of inspection failures.

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Unit 3: Planning and Executing Safe Lifts:

- Steps in planning lifting operations.
- Load calculations and rigging plans.
- Determining lifting points and rigging methods.
- Preparing risk assessments and safety plans.
- Communication protocols and hand signals.
- Coordinating multi-crane operations.
- Monitoring weather and environmental conditions.
- Emergency preparedness for lifting failures.
- Case-based planning exercises.

Unit 4: Hazard Identification and Control:

- Identifying potential hazards in rigging tasks.
- Techniques for hazard elimination and control.
- Lock-out and tag-out during lifting tasks.
- Preventing dropped object incidents.
- Managing people movement in lifting zones.
- Hazard reporting and documentation.
- Lessons learned from major lifting accidents.
- Applying proactive safety measures.

Unit 5: Regulatory Compliance and Best Practices:

- Overview of international safety standards OSHA, ISO.
- National regulations and industry codes of practice.
- Employer and employee legal responsibilities.
- Creating a Safety Culture within the Workplace
- Documentation and audit of lifting operations.
- Training and certification requirements.
- Review of best practices in different industries.
- Benchmarking against industry leaders.
- Developing continuous improvement strategies.

Final Insights & Key Takeaways:

Rigging and lifting operations demand strict adherence to safety protocols and precise planning. This course equips professionals with theoretical expertise to manage lifting tasks effectively and safely. Participants gain confidence in regulatory compliance, risk mitigation, and team coordination. By applying these skills, organizations can reduce incidents and enhance operational efficiency.