Cable Handling Operations

29 August – 2 September 2027
Amman (Jordan)



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Introduction

Cable handling operations are critical activities in marine, offshore, subsea, power, telecommunications, and industrial environments. Improper handling, storage, transportation, installation, or recovery of cables can result in cable damage, equipment failure, operational delays, safety incidents, and significant financial losses.

This one-week **Cable Handling Operations** course provides participants with practical knowledge and operational principles for the safe and efficient handling of cables throughout their operational lifecycle. The course covers cable characteristics, handling equipment, lifting and transportation, storage, deployment and recovery, installation considerations, inspection, damage prevention, and safe working practices.

The programme combines technical understanding with operational procedures and risk-control techniques to help participants improve cable-handling performance while protecting personnel, equipment, and cable assets.

Course Objectives

By the end of this course, participants will be able to:

- Understand the fundamental principles and terminology of cable handling operations.
- Identify different cable types, constructions, components, and handling requirements.
- Apply safe procedures for cable lifting, transportation, storage, and positioning.
- Select and correctly use appropriate cable handling equipment and accessories.
- Understand cable bending radius, tension, pulling force, and load limitations.
- Identify common causes of cable damage and implement preventive measures.
- Conduct basic cable inspections and recognize signs of damage or deterioration.
- Apply appropriate risk assessment and safe working practices during cable operations.
- Understand procedures for cable deployment, installation, recovery, and retrieval.
- Improve operational efficiency while minimizing cable damage, downtime, and associated costs.

Course Outlines



Day 1 — Fundamentals of Cable Handling Operations

1. Introduction to cable handling operations and industry applications.
2. Cable types, constructions, components, and identification.
3. Cable characteristics and mechanical limitations.
4. Cable bending radius, tension, compression, torsion, and pulling forces.
5. Basic principles of safe cable handling, handling plans, and operational responsibilities.

Day 2 — Cable Handling Equipment and Safe Practices

1. Cable drums, reels, baskets, rollers, sheaves, and handling systems.
2. Winches, capstans, cranes, lifting equipment, and pulling systems.
3. Selection and inspection of lifting gear, slings, shackles, and accessories.
4. Safe loading, unloading, lifting, transportation, and positioning of cables.
5. Equipment hazards, pinch points, line-of-fire risks, and safe working zones.

Day 3 — Cable Storage, Transportation, and Installation Preparation

1. Correct cable drum handling, orientation, securing, and movement.
2. Cable storage requirements and environmental considerations.
3. Transportation of cable drums and reels by road, vessel, and other methods.
4. Cable preparation, routing, payout, and installation planning.
5. Cable protection, bend control, tension management, and prevention of mechanical damage.

Day 4 — Cable Installation, Deployment, and Recovery

1. Cable deployment and installation procedures.
2. Cable pulling systems, tension control, and monitoring.
3. Use of rollers, guides, sheaves, and cable protection systems.
4. Cable recovery, retrieval, re-spooling, and handling of recovered cable.
5. Troubleshooting common operational problems and managing abnormal conditions.

Day 5 — Inspection, Risk Management, and Operational Excellence

1. Cable inspection before, during, and after handling operations.
2. Identification of mechanical damage, deformation, abrasion, crushing, and other defects.
3. Risk assessment, toolbox talks, permits, communication, and emergency procedures.
4. Incident prevention, lessons learned, and operational best practices.
5. Case studies, practical exercises, review, and course assessment.

Why Attend This Course? Wins & Losses!



Wins

Participants and organizations can expect to:

- Improve cable-handling safety and operational control.
- Reduce cable damage during lifting, transportation, installation, and recovery.
- Improve the effective use of cable handling equipment.
- Reduce unplanned downtime and costly repairs.
- Strengthen risk assessment and hazard-control practices.
- Improve communication and coordination between operational teams.
- Increase the service life and reliability of cable assets.
- Develop a more consistent and professional approach to cable handling operations.

Losses from Poor Cable Handling

Poor cable handling practices can lead to:

- Cable deformation, crushing, kinking, or abrasion.
- Premature cable failure.
- Damage to expensive handling equipment.
- Personnel injuries and safety incidents.
- Installation delays and project disruption.
- Increased maintenance and replacement costs.
- Loss of productivity and operational efficiency.
- Contractual, financial, and reputational consequences.

Conclusion

Effective cable handling requires a combination of technical knowledge, suitable equipment, proper planning, competent personnel, and disciplined safety procedures. This course provides participants with the knowledge and practical principles required to handle cables safely and efficiently across different operational environments.

By applying the techniques covered throughout the one week, participants will be better prepared to prevent cable damage, control operational risks, improve equipment utilization, and contribute to safer and more efficient cable-handling operations.

Frequently Asked Questions FAQ



1. Who should attend this course?

The course is suitable for cable handling personnel, installation and maintenance teams, offshore and marine personnel, rigging and lifting personnel, cable technicians, supervisors, engineers, operations personnel, and HSE professionals involved in cable-related activities.

2. Is this course suitable for offshore operations?

Yes. The principles can be applied to offshore and marine cable operations, including cable deployment, recovery, transportation, and installation activities.

3. Does the course cover cable handling equipment?

Yes. Participants will learn about cable drums, reels, rollers, sheaves, winches, capstans, lifting equipment, and associated handling accessories.

4. Will the course cover cable damage prevention?

Yes. A major focus of the course is preventing damage caused by excessive tension, improper bending, crushing, abrasion, poor storage, incorrect lifting, and inappropriate handling techniques.

5. Does the course include practical exercises?

The course can include practical exercises, case studies, equipment demonstrations, cable-handling scenarios, and group discussions depending on the delivery environment and available equipment.

6. Can the course be customized?

Yes. The programme can be customized according to the participant's industry, cable type, operational environment, equipment, and specific organizational requirements.

7. What will participants receive after completing the course?

Participants who successfully complete the programme will receive a **Certificate of Attendance** from the training centre.

