TRAINING TITLE
POWER CABLES: OPERATIONS AND MAINTENANCE

Training Duration
5 days

Training Venue and Dates

Ref. No. EE086	Power Cables: Operations and Maintenance	5	12-16 May 2025	$5,500	Abu Dhabi, UAE

In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees
- **$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch**

Training Certificate
Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

The course provides a thorough understanding of power cable systems, their components, and the techniques used for monitoring, testing, and troubleshooting. Emphasis will be placed on the latest industry practices, standards, and tools to ensure cable systems are efficiently maintained, reducing downtime and enhancing reliability. The training will combine theoretical sessions with hands-on practical activities, case studies, and discussions on real-world challenges faced by operators and maintenance teams in the field.

TRAINING OBJECTIVES
By end of course participants will be able to understand
- Understand the components and types of power cables (low, medium, and high voltage cables).
- Comprehend the principles of power cable installation and the factors influencing their performance.
- Recognize common faults and learn effective troubleshooting techniques.
- Conduct proper cable testing using modern tools and techniques.
- Implement preventive maintenance practices to ensure cable longevity and reduce failures.
- Understand cable insulation, grounding, and safety protocols for secure operation.

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- Interpret industry standards and regulations for cable maintenance and safety.
- Perform fault location techniques and repair strategies.

WHO SHOULD ATTEND?
- Electrical Engineers and Technicians
- Maintenance Supervisors
- Field Operators
- Project Managers
- Safety Personnel
- Utility and Industrial Professionals

COURSE PROGRAM

Day 1: Introduction to Power Cables and Systems
- Overview of electrical power cables: types, construction, and materials.
- Low, medium, and high-voltage cables: applications and characteristics.
- Cable standards and specifications (IEC, ANSI, and others).
- Cable terminology and symbols.
- Design considerations for power cable systems.
- Cable insulation: types, properties, and degradation factors.

Day 2: Cable Installation and Commissioning
- Best practices for power cable installation: handling, storage, and laying cables.
- Splicing and termination methods for different cable types.
- Earthing and grounding practices for safety.
- Commissioning procedures and initial testing.
- Quality control during installation: checking cable integrity.
- Documentation and reporting for installed systems.

Day 3: Power Cable Testing Techniques
- Overview of cable testing methods (AC, DC, Tan Delta, and more).
- Tools and equipment for power cable testing.
- Insulation resistance testing and dielectric testing.
- Partial discharge testing.
- High voltage testing techniques.
- Understanding results and interpreting test data.

Day 4: Maintenance and Fault Diagnosis

- o Common causes of power cable failure: mechanical, electrical, and environmental.
- o Preventive maintenance practices to extend cable life.
- o Cable monitoring and condition-based maintenance (CBM).
- o Fault diagnosis: detection, location, and analysis of cable faults.

Day 5: Cable Repair and Safety Protocols

- o Techniques for cable repair: splicing, jointing, and re-termination.
- o Overview of cable fault location and repair tools.
- o Safety practices in handling cables and working with high-voltage systems.
- o Industry safety standards and regulations.
- o Risk assessment and mitigation strategies.
- o Review of key learning points and course wrap-up.

NOTE:
Pre-& Post Tests will be conducted.
Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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