

TRAINING TITLE

ELECTRICAL ISOLATION AND DE-ISOLATION REQUIREMENTS FOR ELECTRICAL SWITCHGEAR

Training Duration

5 days

Training Venue and Dates

Ref. No. EE117	Electrical Isolation and De-Isolation Requirements for Electrical Switchgear	5	10-14 Feb. 2025	\$5,500	DUBAI, UAE
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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

This course covers the essential requirements and procedures for electrical isolation and de-isolation of electrical switchgear, which are critical for ensuring safety during maintenance and troubleshooting activities. Participants will gain a comprehensive understanding of how to effectively isolate electrical circuits and equipment, understand the principles behind isolation and de-isolation, and be aware of the regulatory standards and industry best practices. The course will provide hands-on exercises, real-world scenarios, and discussions on the importance of following strict isolation protocols to prevent accidents, equipment damage, and system failures.

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TRAINING OBJECTIVES

By end of course participants will be able to understand

- **Understand the Key Concepts:** Grasp the principles of electrical isolation and de-isolation in switchgear systems.
- **Identify Isolation Procedures:** Learn the correct isolation methods for different types of electrical switchgear and equipment.
- **Apply Safety Standards:** Familiarize themselves with safety regulations, standards (such as OSHA, IEC, NEC), and industry best practices for electrical isolation.

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- **Conduct Isolation and De-Isolation Safely:** Gain hands-on experience and practical knowledge on safely isolating and re-energizing equipment.
- **Troubleshoot Isolation Failures:** Learn to identify and mitigate potential isolation issues or failures that may occur.
- **Understand Lockout/Tagout (LOTO):** Understand lockout/tagout procedures and their role in electrical isolation.

WHO SHOULD ATTEND?

- Electrical maintenance personnel and engineers
- Plant and facilities managers
- Safety professionals responsible for electrical safety
- Technicians involved in the repair and maintenance of electrical systems
- Anyone working with high-voltage or low-voltage electrical switchgear systems

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

COURSE PROGRAM www.definettraining.com

Day 1: Introduction to Electrical Isolation & De-Isolation

- **Overview of Electrical Switchgear**
 - Types of electrical switchgear (MV, LV, circuit breakers, etc.)
 - Components and functions of electrical switchgear
- **Basic Principles of Isolation**
 - Why electrical isolation is necessary for safety
 - Types of isolation (mechanical, electrical, physical)
- **Regulations and Standards**

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- Overview of IEC, OSHA, and NEC standards related to isolation
- Understanding lockout/tagout (LOTO) procedures

Day 2: Isolation Methods and Safety Protocols

- Isolation Methods for Different Switchgear Systems
 - Methods for isolating circuit breakers, transformers, and other switchgear components
 - Use of disconnect switches, fuses, and relays for isolation
- Safety Protocols
 - Personal Protective Equipment (PPE) for electrical isolation
 - Steps for ensuring proper isolation (testing, grounding, visual checks)

Day 3: Lockout/Tagout (LOTO) Procedures

- Introduction to LOTO Procedures
 - Detailed overview of lockout/tagout procedures and their importance
 - Tools and equipment used in LOTO processes
- Creating LOTO Plans
 - How to develop and implement effective LOTO procedures
 - Ensuring compliance with workplace safety standards

Day 4: De-Isolation Procedures & Re-Energizing Systems

- Safe De-Isolation and Re-Energization
 - Steps involved in safely removing locks, tags, and verifying equipment readiness for operation
 - Conducting electrical tests and verifying no voltage before de-isolation
- Common Issues in De-Isolation
 - Troubleshooting common problems when de-isolating systems
 - Understanding the challenges in safely re-energizing electrical systems

Day 5: Review, Practical Applications, and Assessment

- Review of Key Concepts
 - Recap of isolation and de-isolation processes, safety protocols, and standards
- Advanced Isolation Techniques
 - Isolation in complex systems (e.g., multi-line circuits, interlock systems)
 - Discussion of lessons learned and open Q&A session
- Conclusion and Certification
 - Summary of training and issuing completion certificates

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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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