€TRAINING

Electrical Installation And Maintenance

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Introduction

The electrical Installations & Maintenance training begins with the fundamental principles that always apply to ensure safety. This Electrical Engineering training course then progresses through basic design procedures, inspection, testing, and maintenance requirements, concluding with a review of power quality problems that affect the reliability of an installation where high technology interfaces with a supply.

Course Objectives

At the end of this course the participants will be able to:

- Describe the basics of operating and setting up electrical wiring systems
- Select suitable types and ratings of electrical wiring systems
- Understand the importance of fulfilling the requirements for safe use of electrical equipment and systems
- Comprehend various earthing mechanisms and their importance in safety
- Perform simple methods of calculating to check the suitability of conductors and protective earthing elements to guarantee safe operation
- Specify electrical system testing procedures
- Conduct sporadic checks and verification measures that need to be carried out in an electrical installation as required for compliance purposes

Targeted Audience

- Electrical Engineers
- Installation manager
- Professionals who are involved in maintenance planning, scheduling, and work control, including planners

Course Outline

Unit 1:

- The additional knowledge will help in the design of new electrical installations
- This knowledge will help in upgrading an existing installation when new technology is to be added
- The training course will help an organization to improve its effectiveness in ensuring compliance with standards
- Knowledge of the impact of new technology will help in ensuring the reliability of an installation

Unit 2:

- The basis for safety and functional design
- How to assess the characteristics needed to commence a design process
- The earthing and bonding requirements of an installation for safety and function
- How new technology impacts new and existing electrical installations

Unit 3:

- Knowledge of the design implications to withstand failures due to power quality
- How inspection, testing, and maintenance improve the resilience of an installation
- Inspection and testing techniques that affect the maintenance routine of an installation
- How to improve productivity by improving power quality

Unit 4:

- Maintenance Planning
- Periodic Inspection
- Equipment Reliability
- Complex Testing
- Categories of System
- Harmonic Analysis
- Safety Critical Records

Unit 5:

- Mechanical and Electrical Engineers
- Mechanical and Electrical Technicians
- Electricians
- Maintenance Personnel with responsibility for an Electrical Installation

Unit 6:

- Single Phase Design
- Power Quality
- Three-Phases Design
- Cable Requirements
- Protective Device Selection
- Installation Method
- Earthing and Bonding
- Source of Supply