

Electrical Equipment Maintenance and Troubleshooting

Course Description

This covers the fundamentals and techniques of troubleshooting and maintenance of electrical equipment and connections. It reviews state of the art practices in the maintenance of power substations, motors, and fault protection systems. Actual maintenance problems are introduced for group discussions. Participants are invited to bring their equipment problems to the course.

Course Outline

- ◆ Fundamentals of Electrical Maintenance
 - Types of maintenance
 - Overview of typical power systems
 - Drawing, diagrams and symbols
 - Review of basic laws - Ohms Law, resistance, capacitance, inductance
- ◆ Maintenance Philosophies
- ◆ Maintenance of Electrical Equipment
- ◆ Inspections and Measurements:
 - Power substations and transformers
 - Switchgear fuses moulded case breakers, low voltage and medium voltage circuit breaker
 - AC Motors
 - DC Motors
 - Motor control centers
- ◆ Understanding the Complete Power Systems
 - Use of capacitors in power factor correction
 - Grounding and grounded fault protection
 - Fundamentals of systems analysis
- ◆ Field Tests Essential to Planned Maintenance Programmes
 - Identification and review of measurement and test instruments
 - Methods and interpretation of insulation testing
 - Current injection testing or circuit breakers
 - Low resistance measurements
- ◆ Developing a Sound Maintenance Programme
 - Record Keeping
 - When to call in AN EXPERT
 - Dealing with Emergency Jobs
 - Case Study
- ◆ Troubleshooting Aids
 - Preparation
 - Tools
 - Materials
 - Case Study
- ◆ Troubleshooting Analysis
 - Benchmarking
 - Accountability
 - Record Keeping
 - Case Study
- ◆ Safety in Electrical Maintenance
 - Proper use of test equipment
 - Safe work practice and procedures

Who Should Attend

This course has been designed for maintenance mechanics and plant electricians responsible for performing day-to-day servicing and repairing of a company's electrical equipment. This course will also benefit plant and maintenance engineers, process engineers, personnel involved in plant operation and design, as well as engineering contractor equipment

For any further information please contact us at:

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