

ELECTRICAL EQUIPMENT TROUBLESHOOTING AND MAINTENANCE (REF:OTSEETM001)

Course Objectives

To gain an understanding of the electrical equipment and their maintenance and to use troubleshooting methods.

Course Description

This course 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.

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, and process engineers. In addition personnel involved in plant operation and design as well as engineering contractor equipment specialists, should also find the course beneficial.

Pre-Requisites

All Attendees should have a sound power generation and electrical background.

Course Outcome

At the end of this course you will be able to analyse and maintain electrical equipment.

Course Outline

Day 1

Introduction
Fundamentals of Electrical Maintenance
Overview of typical power systems
Drawing, diagrams and symbols
Review of basic laws – Ohms Law, resistance, capacitance inductance

Day 2

Maintenance of Electrical Equipment
Power substations and transformers
Switchgear fuses moulded case breakers, low voltage and medium voltage circuit breaker
AC Motors
DC Motors
Motor control centres

Day 3

Understanding the Complete Power Systems
Use of capacitors in power factor correction
Grounding and grounded fault protection
Fundamentals of systems analysis

Day 4

Field Tests Essential to Planned Maintenance Programmes
Identification and review of measurement and test instruments
Methods and interpretation of insulation testing
Current injection testing of circuit breakers
Low resistance measurements
Developing a Sound maintenance Programme
Record Keeping
When to call in AN EXPERT

Day 5

Safety in Electrical Maintenance
Proper use of test equipment
Safe work practice and procedures

Course Review and Feedback

