Training Program:

Electrical Distribution Equipment Operation & Maintenance

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Introduction:

Distribution equipment plays an important role in the safe distribution of electrical power. The equipment needs to be operated in a safe manner securing continuity of supply to consumers. The course details the actions required to commission a system to confirm that it works correctly and the specification has been met. The equipment can then be put into operation with confidence. The completion of commissioning should also trigger the start of a cycle of maintenance that will keep the system functioning in a safe manner for the expected lifetime of the installation. The course goes into detail as to how this can be achieved.

The course examines troubleshooting concepts and methods on a variety of types of system, and concludes with a review of actions to take in emergency scenarios.

Who Should Attend?

Electrical Engineers, Electrical Technicians, Electrical Inspectors, Electrical Professionals & Supervisors, Instrumentation and Design Engineers, Maintenance Engineers, Supervisors & Technicians, Energy Management Consultants, Control Engineers & Technicians, Automation & Process Engineers, Chemical & Mechanical Engineers, Consulting Engineers, Field Technicians, Graduate Engineers, Project and Production Managers, Project Engineers, Electronic Technicians, Plant Managers, Process Control Engineers, System Engineers, System Integrators, Testing Engineers & Technicians, Power System Engineers, Power System Technicians, Utility Engineers, Managers & Team Leaders of Engineering Departments, Safety Professionals, Plant Electricians, Facilities Engineers, Operations & Maintenance Engineers, Supervisors & Technicians, Project Engineers, Commissioning & Testing Engineers, Consulting Engineers, Electrical Technologists, Facility & Plant Managers

Course Objectives:

By the end of this course delegates will be able to:

- The need and management for maintenance
- Management and implementation of safe systems of work
- Co-ordination of maintenance activities and maintaining system safety
- Switchgear maintenance, transformer maintenance
- Cable installation and rating; condition monitoring using non-intrusive technology
- Routine inspections, properties of insulating oils

Accreditation:

BTS attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration.

Course Outline

Introductions and Safety

- The smart grid
- Maintenance of electrical equipment
- Managing maintenance

- Safety culture
- Safety integrity level (SIL)
- Electrical safety rules
- Electrical hazards and emergencies

Introduction to Commissioning

- Electrical equipment specification
- Manufacturers tests
- Pre-commissioning
- Commissioning
- Electrical Safety
- IEC 60364
- Wiring Regulations
- Maintenance
- Troubleshooting
- Personal and equipment safety
- Commissioning test methods
- Documentation

Commissioning

- Hazardous area equipment
- Switchrooms
- Motors

- Generators
- Switchgear
- Protection
- Cables and Transformers
- Power Electronics
- Lighting
- Earthing (Grounding) and Bonding

Maintenance Management

- Requirements
- Stand by and Safety Services
- Planning
- Documentation

Troubleshooting Methods

- Hazardous Area Equipment
- Motors
- Generators
- Switchgear
- Cables
- Power Transformers

Emergency Situations

- Electrical Emergencies
- System Design
- Emergency Systems
- Priority Setting
- Communications