Troubleshooting, Maintenance and Protection Of AC Electrical Motors and Drives Course

Venue Information

Venue: London UK

Place:

Start Date: 2026-09-08

End Date: 2026-09-12

Course Details

Net Fee: £4750.00

Duration: 1 Week

Category ID: EAPET

Course Code: EAPET-64

Syllabus

Course Description

It is estimated that electrical drives and other rotating equipment consume about 50% of the total electrical energy consumed in the world today. The cost of maintaining electrical motors can be a significant amount in the budget item of manufacturing and mining industries.

This course gives you a thorough understanding of electrical motor's working, maintenance and failure modes and gives you the tools to maintain and troubleshoot electrical motors. You will gain valuable insight into the selection of the protection necessary to ensure your motors are protected against fault conditions, so as to ensure reliability and long life. You will gain a fundamental understanding of the installation, operation and troubleshooting of electric motors. Typical applications of electric motors in mining, manufacturing, materials handling and process control are covered in detail. You will learn the basic steps in specifying, installing, wiring and commissioning

- Understand AC motor operation and construction
- Specify, select and install motors
- Specify protection requirements for motors
- Specify speed control requirements for motors
- Install and commission motors
- Fix faults on motors
- Interpret motor performance curves
- Interface control circuits of motors with PLCs/DCSs
- Reduce downtime on electrical motors
- Improve plant safety
- Improve plant throughput
- Reduce spares usage and requirements

Course Outlines

- Fundamentals of motor technology
- AC motor theory, construction and maintenance
- Three phase AC induction motors
- Protection of AC motors
- Speed control of AC motors
- Sizing of different motor starters
- Contactor applications
- Protection of AC convertors and motors
- Control systems for AC
- Variable speed drives
- Pulse width modulation
- Field orientation
- Direct torque control
- Soft starters
- Motor Failure Analysis
- Motor Testing Methods
- Motor Maintenance Practices
- The selection of AC convertors for variable speed drive applications
- Installation and commissioning of AC variable speed drives
- Problems related to VSD