

Course Overview:

This course covers the theory, operation, maintenance and testing of power transformers and auxiliary equipment. Topics included are transformer fundamentals, transformer ratings, transformer cooling, nitrogen gas systems and insulation systems. The source concludes with in-depth discussions on transformer testing techniques. This course is applicable to technicians and engineers who need a sound understanding of power transformer operation and maintenance.

Course Objective:

- Explain the basic operation of a transformer.
- Discuss turns ratios and calculate terminal voltage and current.
- Discuss terminal markings and various single phase and three phase wiring schemes. (WYE vs. DELTA)
- Explain how to perform a polarity test on a potential transformer.
- Discuss the electrical testing performed on transformers such as insulation resistance testing, excitation and power factor testing.
- Discuss the various tests performed on insulating oil.

Course Outline:

Transformer Principles
Transformer Classifications
Magnetizing Circuits
Distribution Transformer & Cooling
Transformer Connections
Substation Equipment Commissioning
Transformer Commissioning
Distribution Switchgear Commissioning
HV Equipment Operations and Maintenance
Transformer Maintenance & Testing
Transformers operation and Relaying

Who Should Attend:

Field and shop technicians, field engineers, maintenance and operators and others responsible for the testing and maintenance of power transformers .

Training Language:

EN / AR

Training Methodology:

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation