Transformer Theory, Operation, & Maintenance

Transformers are the key link in any power distribution system and likely the least understood. With an understanding of the construction and maintenance of transformers, you will be able to make informed decisions about the performance and operation of this costly piece of equipment. This course provides a comprehensive overview of electrical transformers found in the industry. It is targeted to those involved in the installation, operation and maintenance of electrical power systems. The course is a fundamental course covering basic transformer theory, applications, construction, maintenance, and testing. Our instruction will provide the greatest possible exposure to transformer construction and maintenance that can be achieved in two days. Anyone who works on or near power generation, transmission, or distribution systems should attend this course. Additionally, supervisors, managers, safety personnel, and those responsible for ensuring a safe work environment should attend this course.

Duration: 8 Hour Program

**BASIC TRANSFORMER THEORY**
- DC and AC Power Circuits
- Reactive Circuits
- Principles of Transformers
- Three-Phase Power

**CONSTRUCTION**
- Core, Windings and Enclosures
- Cooling Methods
- Tank Construction
- Insulating Mediums

**APPLICATIONS**
- Instrument Transformers
- Distribution Transformers
- Power Transformers
- Special Purpose Transformers

**NAMEPLATE DATA**
- General Information
- Connection Diagrams

**ACCESSORIES**
- Over current Protection
- Instrumentation
- Pressure Relief Devices
- Tap-Changers

**MAINTENANCE AND TESTING**
- Problems and Failures
- Small Transformers
- Dry-Type Transformers
- Liquid-Filled Transformers
- Power Factor Testing of Insulation
- Transformer Turns Ratio (TTR)
- Oil Sampling

**SAFETY**