1. Course Details:

Course Code : EPET-006
Course Title : Selecting, Operating and Maintenance High-Voltage Cables
Course Duration : 5 Days

2. Course Overview:

- This training course will present a comprehensive capsule of all the knowledge essential for the medium voltage and high voltage switchgear operations and walk the participants through the switchgear design process using a set of interlinked case studies. The training course focuses mainly on the operation and maintenance of distribution equipment namely transformers, circuit breakers, contactors, isolators and disconnectors.
- Medium and high voltages switchgears are the integral component of any electrical distribution system; hence, the selection and installation of these switchgears are vital to provide protection and safe distribution of electrical power.

3. Learning Outcomes:

- Understand the role and importance of switchgears
- Determine the components and operations of medium voltage circuit breakers
- Explain the different types of maintenance and testing for switchgears
- Analyze the common faults and short circuit current
- Design and components of high voltage transformers

4. Course Contents:

The Role and Importance of the Switchgear in Power Systems

- Circuit breakers, auto reclosers, disconnectors and sectionalizes operations
- Earth switches construction and applications
- Switchgear symbols on single-line diagrams
- Substation switchgear layouts
- Types of current situation

Sulphur Hexafluorides (SF6) and Vacuum Circuit Breakers

- Compression principles
- Dead and Live tank HV circuit breakers
- Operation mechanisms of HV circuit breakers

- Vacuum interrupters operation and maintenance
- Automated circuit breaker monitoring

Maintenance and Testing of Switchgears

- Manufacturer testing
- Installation and commissioning
- Documentation requirements
- Importance of maintenance & testing
- Maintenance strategies

Short Circuit Currents and Calculations and Working Safely

- Introduction to types of relay
- Relay selection, basic concepts and characteristics
- Types of distress and protection modes
- Switchgear numbering and nomenclature
- Switchgear mechanical and electrical interlocking

HV Transformer

- HV current transformers construction, operation and maintenance
- HV potential transformers features and operation
- Power transformer construction and operation
- Protective relay, conservator and breather operating principles
- Maintenance of power transformers

5. Our Methodology:

- Make coaching and monitoring innovative and using modern
- Media training also using on the go training by using interactive means and focusing on
- The exercises, practical applications and real situations study.
- Live delivery method, instructor-led training.
- Experienced consultant, trainers, and professional.
- Qualified trainer with high-level experience

6. Attendance Reports:

- Send daily attendance reports to trainingdep
- Send full attendance report to training dep. by the end of thecourse

- Attend 100 % from the course days also providedaily
- Issue attendance certificate for participant who attend minimum 80% from the course duration

7. Pre/Post Reports:

- Pre- assessment before starting training.
- Post assessment after finish training
- Full report for the deferent between Pre-& Post assessment

8. Who Should Attend?

- Electricians
- Electrical supervisors
- Plant electricians
- Operations & maintenance engineers, supervisors & technicians
- Maintenance technicians