KOENIG
step forward

Electrical Protection

DAY 1

Types of Electrical Protection Devices and Faults

- Importance of Electrical Protection and Control Devices
- Types of Electrical Faults
- Characteristics of High Voltage Fuses for Electrical Protection
- Characteristics of Circuit Breakers for Electrical Protection
- Microprocessor Overcurrent Relays
- Time, Current, Curves and Logic Discrimination
- Hot and Cold Tripping Curves
- LV Switchboard Protection against Short Circuit

DAY 2

Protection Functions and Instrument Transformers

- Power System Architecture
- Protection Functions
- Selective Coordination
- Lock out and anti-pumping relays
- Sensors
- Current and Voltage Instrument Transformers
- Types of Relays
- Numerical Relays and Functions

DAY 3

Busbar, Transformer and Motor Protection Systems

- Busbar Protection
- Transformer Protection
- Motor Protection
- Capacitor Protection
- Overhead Line Protection
- Type of Related Faults

- Relevant Protection Functions
- Protection device coordination

DAY 4

Grounding Systems and Earth Fault Protection

- Overcurrent Protection for Phase and Earth Faults
- Unit Protection Schemes
- Distance Protection
- Protection of Feeders against Overload and Short Circuit
- Types of Grounding System
- Restricted Earth Fault Protection
- Sensitive Earth Fault Protection
- Protection against Over-voltages

DAY 5

Methods of Commissioning Relays, Short Circuit Current Calculation and Harmonics

- Commissioning of Protective Relays
- Calculation of Short Circuit Current
- Fault Topologies
- Short Circuit Current at Fault Point
- Positive, Negative and Zero Sequence Systems
- Triplen Harmonics Effects and Mitigation Techniques
- Wrap-up Session
- Q&A Session