



Asia Masters Center

Electrical Power System Basics For Non-Electrical Professional



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Electrical Power System Basics For Non- Electrical Professional

➔ Course Objective

- To understand power system components and subcomponents
- To review the substation components
- To understand earthing systems
- To understand the different components circuit breakers
- To understand distribution system and power factor improvement
- To review the different transformer types

➔ Target Audience

- Non Electrical
- Mechanical Professional staf

➔ Course Outline

- Power System Components
- Transmission Lines. Distribution Lines.
- Transformers, Circuit Breakers.
- Buses, Switchyards, Fuses. Substations.
- Reclosers. Generators
- Power System Subcomponents
- Current Transformers. Voltage Transformers
- Capacitive Coupled Voltage Transformers
- Protective Relays. Control Relays.

- Master Trip Relays. Programmable Logic Controllers.
- Insulators, Bushings.
- Cable Terminators. Disconnect Switches.
- Air Break Switches
- Motor-Operated Air Break Switches
- Ground Switches. Surge Arrestors. Sectionalizers.
- Batteries. Power Factor Improvement
- Power Factor. Power Triangle
- Disadvantages of Low Power Factor
- Causes of Low Power Factor
- Power Factor Improvement Equipment
- Calculations of Power Factor Correction
- Importance of Power Factor Improvement
- Most Economical Power Factor
- Meeting the Increased kW Demand on Power Stations
- Underground Cables, Construction of Cables
- Insulating Materials for Cables
- Classification of Cables, Cables for 3-Phase Service
- Laying of Underground Cables, Insulation Resistance of a
- Single-Core Cable
- Capacitance of a Single-Core Cable
- Current-Carrying Capacity of Underground Cables
- Cable Testing, Permissible Current Loading
- Types of Cable Faults, A.C. Distribution & Calculations
- Methods of Solving A.C. Distribution Problems
- 3-Phase Unbalanced Loads
- Four-Wire Star-Connected Unbalanced Loads
- Ground Detectors, Introduction to Switchgear
- Switchgear, Essential Features of Switchgear

- Switchgear Equipment, Bus-Bar Arrangements
- Switchgear Accommodation, Short-Circuit, Short-Circuit Currents,
- Faults in a Power System
- Circuit Breakers, Classification of Circuit Breakers
- Oil Circuit Breakers, Types of Oil Circuit Breakers
- Air-Blast Circuit Breakers, Sulphur Hexafluoride (SF6) Circuit
- Breakers, Vacuum Circuit Breakers (VCB)
- Circuit Breaker Ratings, Transformer
- Types of Transformers, Elements of Transformers
- General Theory of Transformer Operation
- Transformer Characteristics, The Three-Phase Transformer
- Taps, Substation Transformers, Basic Objectives
- Earthing Electric Equipment, System Earthing
- MV Earthing Systems
- Earthing Systems in LV Distribution Networks

➤ **The Feature Of Asia Master Training And Development Center**

- we pick up the customer from the airport to the hotel.
- we give the participant training bag includes all the necessary tools for the course.
- Working within groups to achieve the best results.
- All our courses are confirmed and we do not postpone or cancel the courses regardless of the number of participants in the course.
- We can assist you in booking hotels at discounted prices if you wish to book through us.
- We offer the certificate from Asia Masters Center for Training and Administrative Development.

➔ **The Cost Of The Training Program Includes The Following:**

- 1) Scientific article on flash memory.
- 2) Training Room.
- 3) Training.
- 4) Coffee break.
- 5) The training bag includes all the tools for the course.

Price (USD)
<p>Communicate with the training department to know the participation fees</p> <p>➤ There are offers and discounts for groups</p>
<p><u>The details of the bank account</u></p> <p>Bank name: CIMB Bank Berhad</p> <p>Account name: Asia Masters Center SDN. BHD</p> <p>Bank account number: 80-0733590-5</p> <p>Swift code: CIBBMYKL</p> <p>IBAN: Null</p>