





# **Course: Electrical Switchgear for Engineers**

Code	City	hotel	Start	End	price	Hours
753	Hong Kong	Hotel Meeting Room	2024-08-26	2024-08-30	5950 €	25

## Objective

This scope includes material that enables attendees to have in-depth understanding of theory of operation of electrical switchgear and essential issues relevant to daily operation and maintenance of motor control centers and low-voltage, medium-voltage and high-voltage switchgear

## Who should Attend

- Electrical Engineers.
- Senior technicians who work in the electrical control and power utilities.
- Technicians who would like to refresh their knowledge.
- Mechanical and chemical Engineers who are interested in control subjects.

## Outline

## • Introduction to Electrical Switchgear:

- $\circ\,$  General information about switch gear.
- Switchgear use.
- Switchgear requirements.
- Codes and Standards.
- Types of Switchgear:
  - Classification of switchgear.
  - Switchgear construction:
  - The switchgear assembly.
  - Switchgear enclosures.
  - Mechanical degree of protection.
  - Busbars.
- Switchgear Earthing System
  - Switchgear Earthing Requirements
  - Components Earthing
- Medium Voltage Circuit Breakers, Fused Contactors and Load Break Switch
  - Description for Each Item
  - $\circ$  Differences
- Switchgear Arc Extinction Media and Theory
  - $\circ\,$  Types of Arc Extinction Media
  - $\circ$  Advantages



- Differences
- Switchgear Protection and Control
  - Switchgear Protection Scheme
  - Control requirements

## • Switchgear Metering

- $\circ~$  Metering specifications
- $\circ$  Metering requirements

# • Current Transformers

- Types
- Accuracy
- Potential Transformers
  - $\circ$  Types
  - Requirements.

# • Factory Acceptance Test (FAT)

- $\circ\,$  Type test
- $\circ$  Routine tests

# • Handling and Storage

- $\circ~$  Handling procedures
- $\circ \ {\rm Storage} \ {\rm requirements} \\$
- Erection
  - Safety
  - Erection Preparations
- Site Acceptance Test (SAT)
  - $\circ$  Description
  - Requirements
- Commissioning and Start-up.
  - $\circ$  Procedures
  - $\circ~$  Hand over system

# • Trouble Shooting

- $\circ~$  How to deal with
- $\circ$  Requirements



The Scandinavian Academy employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:

- Theoretical Lectures:
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- Scientific Assessment:
  - $\circ\,$  We evaluate trainees skills before and after the course to ensure their progress.
- Brainstorming and Interaction:
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- Practical Cases:
  - $\circ\,$  We provide practical cases that align with the scientific content and the participants specific needs.
- Examinations:
  - $\circ\,$  Tests are conducted at the end of the program to assess knowledge retention.
- Educational Materials:
  - $\circ\,$  We provide both printed and digital scientific and practical materials to participants.
- Attendance and Final Result Reports:
  - $\circ\,$  We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- Professionals and Experts:
  - $\circ\,$  The programs scientific content is prepared by the best professors and trainers in various fields.
- Professional Completion Certificate:
  - $\circ\,$  Participants receive a professional completion certificate issued by the Scandinavian Academy for
    - Training and Development in the Kingdom of Sweden, with the option for international authentication.
- Program Timings:
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.