





# Course: Electrical Switchgear for Engineers

Code	City	hotel	Start	End	price	Hours
<b>753</b>	Stockholm (Sweden)	Hotel Meeting Room	2024-06-10	2024-06-14	5450 €	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:

- General information about switchgear.
- Switchgear use.
- Switchgear requirements.
- o Codes and Standards.

### • Types of Switchgear:

- Classification of switchgear.
- Switchgear construction:
- The switchgear assembly.
- Switchgear enclosures.
- Mechanical degree of protection.
- o Busbars.

## • Switchgear Earthing System

- Switchgear Earthing Requirements
- Components Earthing

## Medium Voltage Circuit Breakers, Fused Contactors and Load Break Switch

- Description for Each Item
- Differences

#### Switchgear Arc Extinction Media and Theory

o Types of Arc Extinction Media



- Advantages
- o Differences

# • Switchgear Protection and Control

- Switchgear Protection Scheme
- Control requirements

# • Switchgear Metering

- Metering specifications
- Metering requirements

### • Current Transformers

- o Types
- Accuracy

## • Potential Transformers

- Types
- $\circ$  Requirements.

## • Factory Acceptance Test (FAT)

- Type test
- Routine tests

## • Handling and Storage

- Handling procedures
- Storage requirements

### • Erection

- o Safety
- $\circ \ \ Erection \ Preparations$

# • Site Acceptance Test (SAT)

- Description
- Requirements

## • Commissioning and Start-up.

- Procedures
- Hand over system

## • Trouble Shooting

- How to deal with
- 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:

• 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:

• 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:

• We provide both printed and digital scientific and practical materials to participants.

## • Attendance and Final Result Reports:

• We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.

#### • Professionals and Experts:

• The programs scientific content is prepared by the best professors and trainers in various fields.

### • Professional Completion Certificate:

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.