

## Course description

# CHS224

## Gas Insulated Switchgear Operation & Maintenance (project-specific)

### Course goal

The primary course aim is to ensure safe, cost-efficient and risk-free operation of customers' Gas Insulated Switchgear system

### Learning objectives

The participant

- understands the operation and maintenance philosophy
- knows the overhaul criteria
- is able to set up a maintenance plan for the project-specific Gas Insulated Switchgear system
- can apply tools for maintenance supervision
- knows relevant technical documentations
- SF6-gas, handling and measuring instruments

### Participant profile

Design and planning personnel, engineering and application personnel, operation and maintenance personnel, consultants from electricity supply industry, technical personnel from ABB companies

### Prerequisites

Basic knowledge on electrical or mechanical engineering, knowledge on Gas Insulated Switchgear system

### Topics

Product description and design

- Circuit-breaker and breaker drive mechanism
- Disconnecter, earthing switch, fast acting earthing switch
- Statical components like connecting elements, busbars, lateral dismantling elements, compensators
- SF6-to-air bushing
- Surge arrester

GIS layout and gas schematic diagram

- Gas schematic diagram and concept of segregation for selective access to components
- Layout concept and feeder architecture

SF6-gas, handling and measuring instruments

- Properties and environmental aspects when working with SF6-gas
- Handling equipment and practical application of reclaiming (evacuating, filling, reclaiming)
- Measuring instruments incl. practical measurements (air content/humidity and density)

Operation, maintenance and trouble shooting

- Guide through switchgear manual about steps and rules for operation and maintenance
- Planning and checkpoints of maintenance tour
- Time-based and load-based maintenance and corresponding maintenance intervals
- Maintenance and operation procedures on apparatus
- Repair procedures for CB-chamber, CB-drive, replacing DS/ES drive, work with pressurized compartments and insulators

### Course type and methods

Presentations, practical demonstrations, exercises, factory tour

### Duration

10 days

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