

# CHS223

## Gas Insulated Switchgear Basic

### Course goal

The course conveys knowledge on the ABB Gas Insulated Switchgear product portfolio, its function, operation and maintenance philosophy

### Learning objectives

The participant

- understands the function and design of a Gas Insulated Switchgear
- can describe the function of the components and their working principle
- knows typical single line diagrams and arrangements of gas zones
- knows the ABB product portfolio range and Gas Insulated Switchgear specific applications and benefits
- understands the operation and maintenance philosophy

### 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 switchgear

### Topics

Introduction

- Overview on typical single line diagrams for GIS and -associated physical layout architecture
- Rules for subdivision of GIS to gas zones

Function and design of components

- Design features
- Working principle and technical data of switching components like circuit-breakers, disconnectors, grounding switches
- Spring hydraulic drive mechanism

- Statical components like voltage- and current transformers
- Connecting elements, SF6-gas -to-air bushings, cable and transformer interfaces
- Gas supervision apparatus (level switches, on-line gas monitoring)

SF6-gas handling

- Properties of SF6-gas environmental aspects
- Application of dewpoint-, decomposition products-, SF6-gas -%, -measuring devices
- Pressure gauges for GIS
- Leak detection

Maintenance concept

- Overview on operation and maintenance manual
- Service concept of GIS

### Course type and methods

Presentations, practical demonstrations, exercises, factory tour

### Duration

5 days

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