COURSE DESCRIPTION

CHH621 – Gearless Mill Drive
Theoretical System Overview

Course goal
The goal of this course is to provide participants with the required theoretical knowledge of gearless mill drives (GMD) before the system will be installed and operated on-site.

Main learning objectives
The participants will be able to:
— Identify the hardware components and the installation principles
— Understand the functionality of the main components of the gearless mill drive system
— Understand the cooperation and interaction of the system components and how they do affect the system behavior and protection
— Understand general operation principles of the GMD on a non-technical level
— GMD system general operation principles (functional description of each system and subsystem components)
— GMD application 800xA description
— GMD application AC800PEC description
— Ring motor and instrumentation description
— Ring motor auxiliaries description
— E-house description
— E-house auxiliaries description
— Cycloconverter and instrumentation description
— 800xA auxiliary control of GMD system
— AC800PEC & 800xA interaction communication and control description.
— Software tools – purpose and examples
— GMD operation manuals and documentation

Participant profile
This training is targeted to project managers, sales, planning and management personnel that need to understand the system and have a better comprehension about operation and different components of the GMD system.

Prerequisites
Participants should be working or be involved with the GMD business.

Topics
— GMD system components (control hardware, power hardware)
— GMD system components description and operation from other vendors (out of battery limits, brakes, pumps, MCB, knife switches)

Course type and methods
This is an instructor-led course with interactive classroom discussions, group work, demonstrations and associated theoretical exercises. Practical hands-on activities are not part of this basic course.

Duration
The duration is 1 day.

Remarks
This training course is a recommended prerequisite for all our other GMD courses. It is delivered at our ABB training center in Switzerland.
## Course map

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### Topics

- Functionality of GMD system and cycloconverter
- CCT and MLCP
- Mill operation and point of control
- Questions and answers
- Evaluation
- Course close

### Time

- MORNING: 8:30 am – 12:00 pm
- AFTERNOON: 1:30 pm – 5:00 pm

Typical course layout (time or sequence may change)