COURSE DESCRIPTION

CHH629B – System 800xA
GMD Applications with CDE

Course goal
The goal of this course is to get an introduction to the Extended Automation System 800xA with AC800M controllers and Minerals Library for gearless mill drive (GMD) applications.

Main learning objectives
The participants will be able to:
- Explain the System 800xA architecture and the function of the different components
- Describe the main components of the AC800M controller hardware
- Configure the AC800M hardware and corresponding I/Os
- Understand the basics of Control Builder M and Control Diagram Editor (CDE). BMI library- and controller-structures in order to configure and program the AC800 controller
- Design and configure application programs using BMI Library
- Setup the OPC connectivity to AC800M
- Navigate in the system using Plant Explorer and understand the concept of aspect directory, aspect objects and aspects
- Explain the basic functionality of graphic displays and faceplates
- Understand the purpose of Structured Data Types and Control Modules
- Use the Standard and Minerals Libraries
- Set up the historical data collection and configure trend displays
- Describe the main components of the GMD system (ring motor, lube, brake, communications)
- Understand the signal- and data flow through the GMD application (mill auxiliaries and communication links)
- Monitor and control the process objects of the GMD
- Monitor the event and alarm lists and acknowledge alarms
- Use the import/export tool
- Backup and restore the System 800xA

Participant profile
This training is targeted to engineering, planning, advanced operating, commissioning, maintenance and service personnel working in GMD areas.

Prerequisites
Participants should know the fundamentals of working with control systems, have basic knowledge of Windows XP Operating System and of technical English.

Topics
- Basic architecture of System 800xA
- System components and terminology
- AC800M controller hardware
- Basics of Control Builder M tool
- Using Control Diagram Editor (CDE)
- Signal- and data flow
- Overview of standard and BMI Libraries with PCC Interlocking
- Plant Explorer – engineering workplace
- Operator workplace – operating
- Event- and alarm handling
- Historical data collection and trend displays
- System 800xA architecture for GMD
- GMD application structures
- Monitoring and testing applications
- OPC communication
- Import/export tool
- Backup and restore of the System 800xA

Course type and methods
This is an instructor-led course with lectures, demonstrations, interactive discussions and practical exercises.

Duration
The duration is 5 days:
- 8 hours daily for face-to-face classes
- 5 hours daily for remote sessions

Remarks
This course can be delivered at our Learning Center in Switzerland, at your site or as a remote session.
## Course map

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<td>Structured data type handling</td>
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<td>Configuration and test with Control Builder M and Control Diagram Editor (CDE)</td>
<td>Programming with Function Block Diagram language</td>
<td>Ring motor, E-house, Lube and brake</td>
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<td>Function split between AC800M and AC800PEC</td>
<td>Variables and data types</td>
<td>BMI Library, DIS/DIC, AIS/AIC, Mot1, valves, group</td>
<td>Communication to DCS, AC800PEC and MCC</td>
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<td>Plant Explorer and engineering workplace</td>
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<td>OPC connectivity</td>
<td>Use of import/export tool</td>
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<td>Project framework</td>
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<td>Use of backup and restore functions</td>
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<td>Time (face-to-face class)</td>
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Typical course layout (time or sequence may change)