
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/O modules
- Understand the basics of Control Builder M and Control Diagram Editor (CDE). BMI library-, application- and controller-structures in order to configure and program the AC800 controller
- Design and configure application programs using Minerals 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 operating systems 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 Minerals Libraries with PCC Interlocking
- Plant Explorer – engineering workplace
- Operator workplace – operating
- Event- and alarm handling
- Historical data 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

A customer specific virtual machine of the 800xA auxiliary control or a similar application will be used as a training PC.

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

Course map

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Topics	Welcome, personnel introduction Course overview System 800xA architecture Function split between AC800M and AC800PEC Plant Explorer and engineering workplace Project framework Plant Explorer Control Builder M AC800M hardware Overview Configuration and test with Control Builder M	Review day 1 AC800M hardware (continues) Configuration and test with Control Builder M and Control Diagram Editor (CDE) Variables and data types	Review day 2 Structured data type handling Programming with Function Block Diagram language Minerals Library, DIS/DIC, AIS/AIC Mot1, valves, group OPC connectivity	Review day 3 GMD application System network AC800M and AC800PEC GMD interlocking concept GMD application Ring motor E-house Lube and brake Communication to DCS, AC800PEC and MCC	Review day 4 GMD application Ring motor E-house Lube and brake Communication to DCS, AC800PEC and MCC Use of import/export tool Use of backup and restore functions Backup of System 800xA Questions and answers Evaluation Course close
Time (face-to-face class)	9:00 am – 5:00 pm	9:00 am – 5:00 pm	9:00 am – 5:00 pm	9:00 am – 5:00 pm	9:00 am – 5:00 pm
Time (remote session)	to be defined	to be defined	to be defined	to be defined	to be defined

Typical course layout (time or sequence may change)