COURSE DESCRIPTION

CHH658 – Engineering Base (EBase) System 800xA Application for Minerals

Course goal

The goal of this course is to learn to follow the engineering workflow and utilize the Engineering Base (EBase) to handle bulk data and create efficiently and professionally minerals control applications to be run on the Extended Automation System 800xA with AC800M controllers.

Main learning objectives

The participants will be able to:

- Engineer a minerals plant automation system using EBase and Control Builder M with Control Diagram Editor (CDE)
- Plan I/O cabinets (CAD Drawings)
- Configure a Minerals Library based application software in EBase
  - Import customer data
  - Generate data via typicals
  - Perform the I/O allocation
  - Configure start/stop sequences
  - Define interlocks, alarm limits, event texts, etc.
- Export to Control Builder M

Participant profile

This training is targeted to engineering and planning personnel responsible for the bulk data handling and control programming for minerals applications at the start phase of the project.

Prerequisites

This training is targeted to ABB people. Participants should have successfully completed the course CHH651B “System 800xA Applications for Minerals – Configuration (with CDE) and Operation”.

Topics

- Engineering workflow
- Minerals Library
- Introduction to EBase Electrical
  - Structures and navigation
  - Electrical CAD drawings
  - Generate signals and loop drawings with typical coy
  - Worksheets and reports
- Application configuration with EBase
  - Import data and compare
  - I/O allocation
  - Function/object types
  - Start- and stop sequences
  - Parameterized interlocks
  - Alarm and event definitions
- Export to Control Builder M
- Finalize application software with Control Builder M CDE
- Downloading to Controller AC800M
- HMI visualization of application
- Online testing

Course type and methods

This is an instructor-led course with lectures, demonstrations, interactive discussions and practical exercises. After the introduction and general handling part the focus is on the minerals project workflow, where students will configure and program material transport groups.

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.

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Course map

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Topics	Welcome, personnel introduction Course overview Introduction to engineering workflow EBase data model Using the EBase Explorer EBase shapes and drawings Connections and potentials in EBase Copying sheets and objects Using circuit components	Review day 1 Wires and cables in EBase Layout diagrams Device frames EBase terminal block diagrams EBase worksheets and reports	Review day 2 Minerals Library design rules Application structure in EBase Start of guided exercise Import PDP load and signal lists EBase typical copy to generate process object related signals EBase typical copy to generate loop drawings Create/modify new loop drawing	Review day 3 Handling I/O boards in EBase and I/O allocation IO labels for S800 I/O's Cable list and macros for cable list Understand and modify Hardware and application export templates Hardware and application export EBase to CBM	Review day 4 Configure group start and previous drive using worksheets Configure PCC interlocks using worksheets Use of associations to assign objects to more than one group or consumer Finalize application software with CBM CDE Extend example with second diagram (use of GCC_Com, GCC_Connect, PCC_Com and PCC_Connect) Visualization and testing in 800xA Questions and asnwers 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)

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