COURSE DESCRIPTION

CHH650 – System 800xA Applications for Minerals Engineering with PDA Tool and Control Builder

Course goal
The goal of this course is to learn to follow the engineering workflow and utilize the Plant Design & Allocation (PDA) tool 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:
- Follow the engineering workflow
- Utilize the Minerals Library
- Navigate in PDA structures
- Set up a PDA project
- Use the PDA base functions
- Configure the application with PDA
- Download to Control Builder M
- Program preselections and additional interlocks
- Download to Controller AC800M or to SoftController
- Visualize objects
- Perform online tests
- Use additional functions

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
Participants should have attended the course CHH651A “System 800xA Applications for Minerals – Configuration and Operation”.

Topics
- Engineering workflow
- Minerals Library
- PDA structures and navigation
- PDA project setup
- PDA basic functionality
- Application configuration with PDA
  - Customer data handling
  - I/O allocation
  - Object categories
  - Start- and stop sequences
  - PCC links and interlocks
  - Alarm and event definitions
- Downloading to Control Builder M
- Programming of pre-selections and additional interlocks
- Downloading to Controller 800M
- Visualization of objects
- Online testing
- Additional functions
  - Export
  - HDRS import/export
  - CBM upload
  - Copy functions

Course type and methods
This is an instructor-led course with lectures, demonstrations, interactive discussions and practical exercises. The course flow is based on three main practical parts, where students will configure and program a cement mill feed group, a cement transport group and a mill lubrication group. The teacher is guiding the students through the exercises, step by step.

Duration
The duration is 5 days.

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Course map

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Topics	Welcome, personnel introduction Course introduction Introduction to engineering workflow Minerals (BMI) Library – design rules Overview of the different object categories and object types Variable and application structure Minerals (BMI) Library How to add I/O-signals How to insert a motor in an existing group	Review day 1 PDA basic functionality Tool handling Setting up a new project General form functions Application configuration with PDA Import customer data Generate signals from process objects I/O allocation Basic objects Consumer objects Group objects Loop objects	Review day 2 Guided exercise to program and configure an application for the **cement mill and mill feeding group** using PDA tool for bulk data engineering and Control Builder tool for programming additional interlocks Visualization Testing	Review day 3 Guided exercise to program and configure an application for the **cement transport group** using PDA tool for bulk data engineering and Control Builder tool for programming preselections and additional interlocks Visualization Testing	Review day 4 Guided exercise to program and configure an application for the **mill lubrication group** using PDA tool for bulk data engineering and Control Builder tool for programming preselections and additional interlocks Visualization Testing Summary Evaluation Course close
Time	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

Typical course layout (time or sequence may change)

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