
COURSE DESCRIPTION

CHP411

Advant Power Control Expert Training

Course goal

The participants acquire in-depth knowledge about the Advant Control System with APC for combined cycle power plant based on Egatrol 8 and Turbotrol 8.

Main learning objectives

- Monitor and analyze the data flow from the I/Os to the HSI and the PGIM
- Handle and utilize the programming tools for AC160 and AC450
- Configure and modify graphic displays
- Configure historical data collection and trends
- Analyze and configure alarm and events
- Backup and restore

Participant profile

System, process and application engineers. Maintenance, service and commissioning engineers.

Prerequisites

Knowledge corresponding to courses CHA331, CHP415 and CHT320

Knowledge on automation and control (open and closed loop control)

Knowledge GT and CC process

Topics

- User documentation, design rules, operation – and maintenance manuals
- On-line and off-line modifications of programs and database
- Backtranslate AC450 programs to the Function Chart builder
- Principals of Type Circuits and APC functional units and the user defined APC elements (for example C2PB) in the AC450 and AC160

- Signal transfer from AC160 to AC450/HSI using DSP (Data Set Peripheral) and Event Sets
- Learning to trace signals and alarms/events from the I/O point up to the HSI and vice versa
- Software structure of open loop, closed loop and protection functions. Cycle time of programs and communication
- How to correctly replace redundant modules (PM6x5, etc)
- Backup and Restore operations (what, how and how often)
- Maintain application data consistently (type circuits, user disk handling, types of loading/dumping, flash card burning)
- Hardware and software structure of EGATROL 8, cabinet layout, AF100 bus layout, redundancy
- Adding I/O signals at the Function chart builder and load it to the AC450/AC160
- System 800xA architecture for Advant Master
- HSI plant pictures, alarms, events, system messages
- Defining and using APC
- Understanding the fundamentals of historical data
- Realization of Plant Control Functions by “Functional Units” and “Type Circuits”
- Documentation of FUs with reading exercises
- Small engineering exercises

Course type

This is a face to face class room training with maximum 8 participants.

Learning methods and tools

Lectures, demonstrations, practical exercises and approx. 60% of the course is hands-on activities. **Laptop** or tablet is required to have access to the e-documentation.

Duration

10 days

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