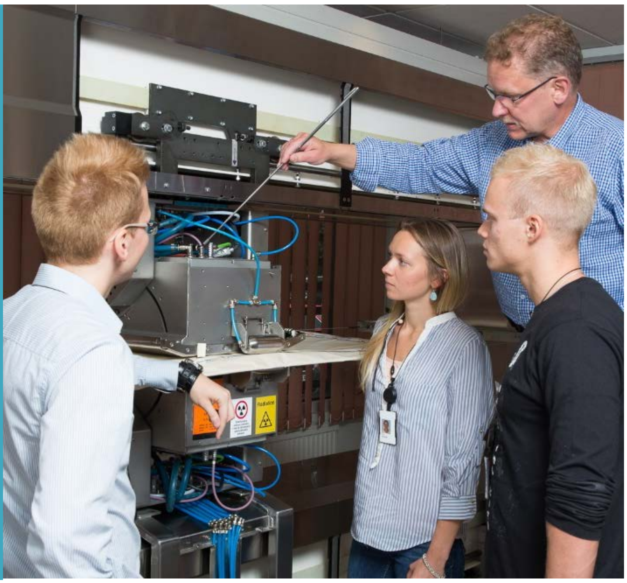
Valmet IQ MD Controls course

This course provides a review of the theory and algorithms of Valmet IQ MD Controls (machine direction multivariable controls).
The following high level controls are detailed:

- oven dry weight control
- paper ash control
- headbox ash control
- white water consistency control
- moisture control.

Valmet DNA low level loops and PID tuning will also be covered. Controls are detailed through the use of theory and with Valmet DNA simulator.



Objective

After completing the course the participants will be familiar with Valmet IQ MD Controls product. They will be able to evaluate the process and the current MD control performance as well as maintain the MD control tuning.

Target group

QCS maintenance persons

Prerequisite

Valmet DNA operator skills

Course duration

4 days.

Course limit

Max. 8 attendees.

Benefits

Through Valmet's professional training programs, either standard courses or tailored to your specific needs, you will have optimized competences available in your organization. Together we make a development plan for your personnel based on your business needs, and deliver the agreed training flexibly and effectively.

Optimized competence development enables
- better utilization of features in the automation and control solutions
- proper installation, start-up, operation and maintenance of the solutions and equipment
- improved knowledge of product-related safety and environmental issues
- better employee motivation

The results are typically visible as higher productivity, plant availability, improvements in end product quality, time and material savings.

© Valmet, Valmet IQ, BR81485_EN_01, 07/2015

For more information, contact us:
www.valmet.com/automation/training
training.automation@valmet.com

Course Program

Day 1, 9:00 – 16:00

Overview to MD Controls
- Valmet’s MD solutions
- SISO vs. MIMO

Demo
- MD operator interface
- MD controls general features

Control theory
- 1. and 2. order Process models
- Step response (bump test)

Day 2, 8:30 – 16:00

PID tuning

Demo
- Low level PID tuning
- TuneUp / DNAautotune

Valmet IQ MD Controls application
- Scope and structure
- Signal names

Demo
- Tuning pictures & parameters
- Maintenance terminal (debugger) and MD controls

Day 3, 8:30 – 16:00

MPC-algorithm
- Optimisation
- Cost function
- Unit conversions

Process models
- 1 or 2 order
- Direct models and cross models

Demo
- Defining a model with bump test

ODRL dry weight control
- Start-up parameters
- Operation in sheet break
- ODFF feedforward weight

Day 4, 8:30 – 15:00

TARL & ACHB ash controls
- Start-up parameters
- Measurement filtering

CSWW White water consistency control
- Start-up parameters
- Measurement filtering

Coordinated speed change

© Valmet, Valmet IQ, BR81485_EN_01, 07/2015

Specifications in this document are subject to change without notice.
Product names in this publication are all trademarks of Valmet Corporation.