

Training Solution Life Sciences Industries

Tailor made solution with hardware and teachware

Learning objectives

Have a good overview for instrumentation in hygienic applications

- Selection
- Installation
- Commissioning

Special skills

Learn to set-up field devices

- Level
- Pressure
- Flow
- Temperature
- Analytical

Additional know how

Understand the basics of Life Cycle Management of field devices

- Recalibration
- Documentation
- Device diagnostic

Communication technologies

- 4..20mA HART
- Profibus
- Foundation Fieldbus
- Ethernet IP
- Wireless HART



Latest technology like retractable assembly "Cleanfit"



The HMI of the control system as interface between the process and the operator

Instrumentation for life sciences industries requires special attention due to hygienic but also safety requirements.

Endress+Hauser therefore offers a customer specific training solution, developed and built by the specialists of our Application Training Center in Reinach Switzerland.

Customer requirements Operating and maintenance staff of pharmaceutical industry should be trained on how to handle field instruments. In addition bus technology and Life Cycle Management should be part of the training package. The training should incorporate lab sessions.

Training solution A training rig that simulates biotechnological production and the cleaning process will be used to deliver practical experience on how to configure, calibrate and maintain field instruments. Participants will make use of different communication protocols and a Plant Asset Management system.

Hardware The heart of the rig is a reactor with heating jacket and agitator, providing a suitable environment for cell growth. If pollution of other equipment with organic cells could be a problem, the cell growth can also be simulated. A CIP cycle completes the hygienic design of the training rig.



The life sciences training rig covers the process of biofermentation under real conditions

Training package This course involves all elements of process instrumentation, basic measurement principles, selection, installation, set-up, operation and device exchange. Also Life Cycle Management (like device re-calibration, device exchange etc.) and remote configuration technologies are included.

The course is designed to offer participants practical experience with hands on exercises and theoretical knowledge via classroom training.

The training rig includes

Flow Coriolis, electromagnetic, ultrasonic
Level Capacitive level, guided radar, vibronic limit switches
Temperature RTD sensors, temperature switches
Analytical pH, dissolved oxygen, cell count, conductivity
Components Digital recorder
Actuators Frequency inverter, on/off valve, dosing pumps, centrifugal pumps, agitator
Control system Rockwell Automation ControlLogix
Operation software Rockwell Automation Factory Talk View

Configuration software Fieldcare, DeviceXpert
Communication 4-20mA HART, Profibus DP and PA, Foundation Fieldbus, Ethernet IP, Wireless HART
PAM system W@M portal, CompuCal

The training documentation comprises Trainer guide as screenplay, PowerPoint presentations for theoretical sessions, exercises with solutions, hand out for trainees, assessment and a detailed documentation of the training hardware.

Application Training Center

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