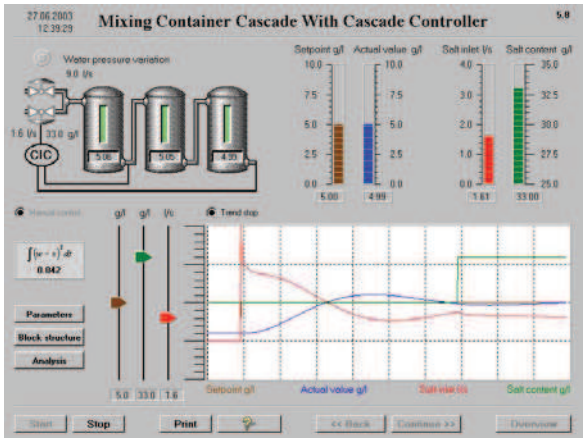
WinErs - Process Control Training

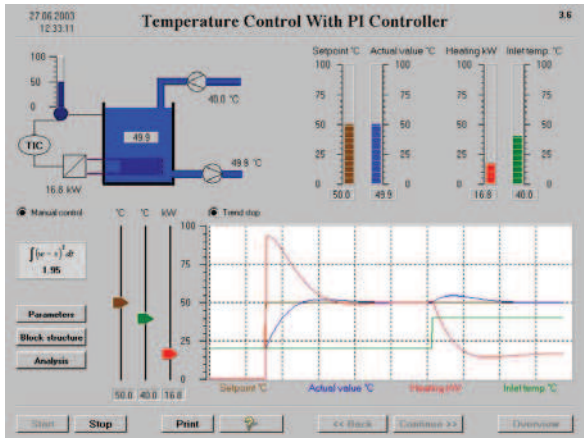
Use this special training version of the process control system WinErs for education in control engineering and to obtain experiences handling a process control system.

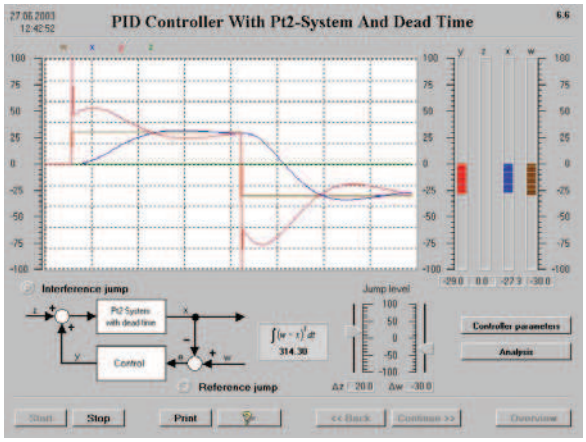
Explore the behavior of controlled systems, controllers, and control loops.

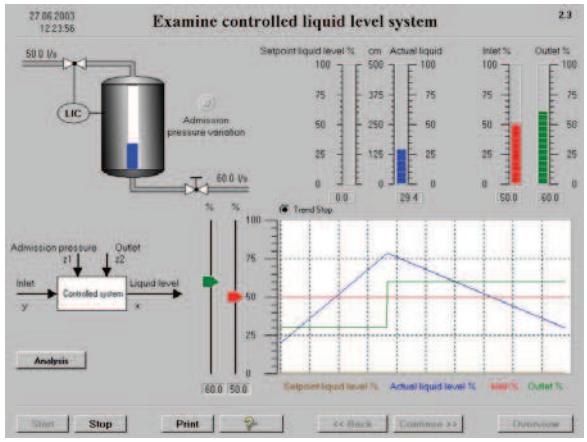
Obtain the fundamentals of process control engineering with these four complete process simulations.

- control of a continuous-flow water heater
- water level control
- control of a stirring tank cascade
- examination of PT_n controlled systems with P-, I-, PI- and PID-controllers



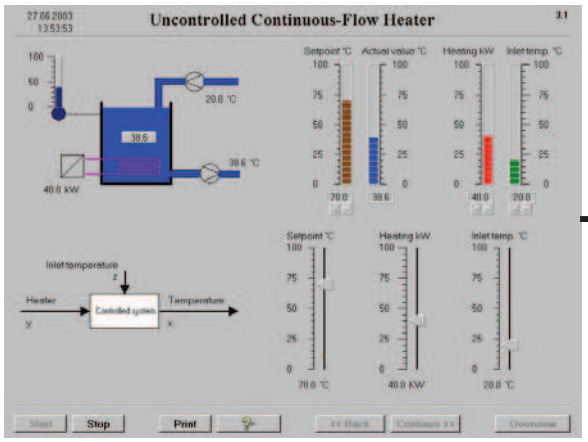






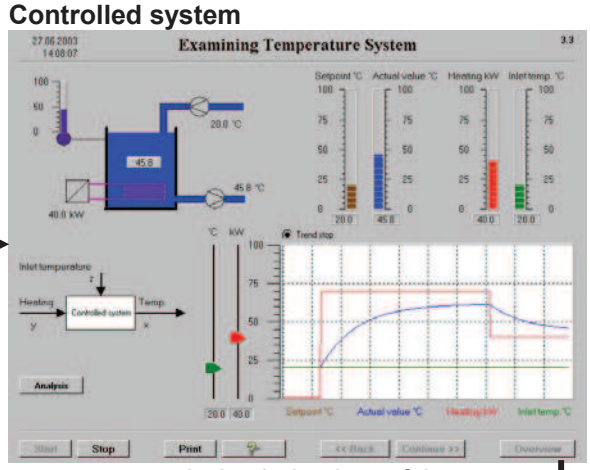
Didactic structure

Introduction



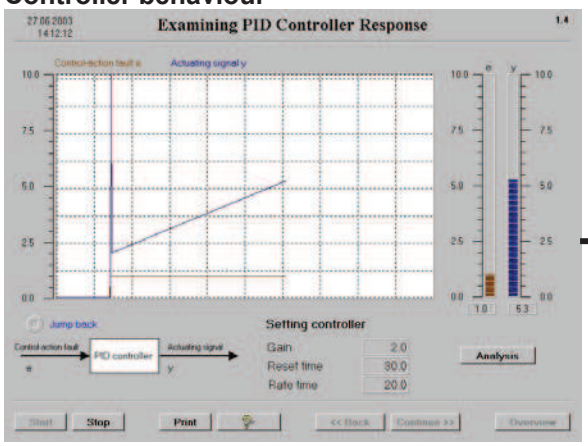
- controlled system
- uncontrolled system

Controlled system



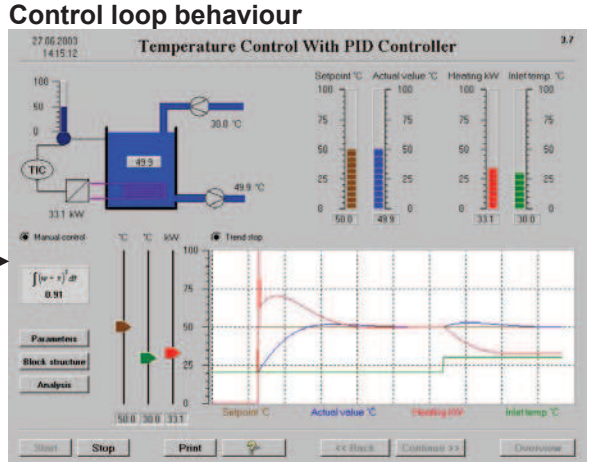
- transmission behaviour of the process
- response to changing set-points

Controller behaviour



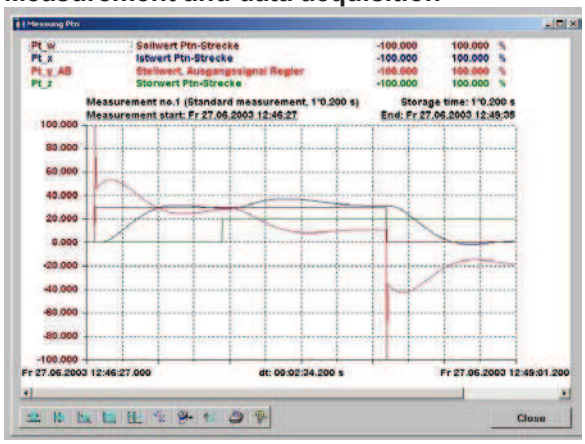
- I-/O-behaviour of controllers
- controller types: P, I, PI, PID

Control loop behaviour



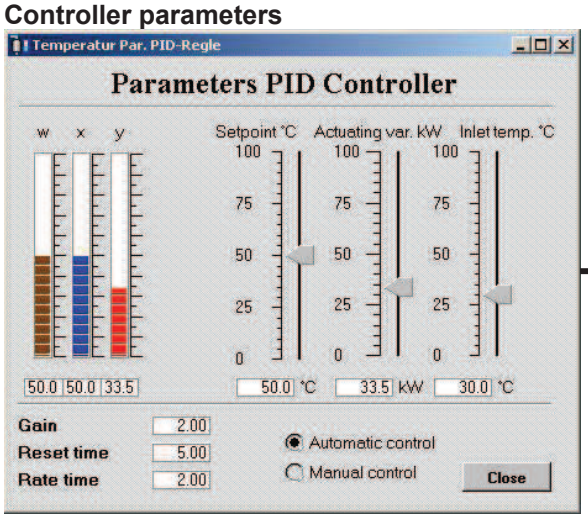
- leading and disturbing behaviour of control loops
- controller types

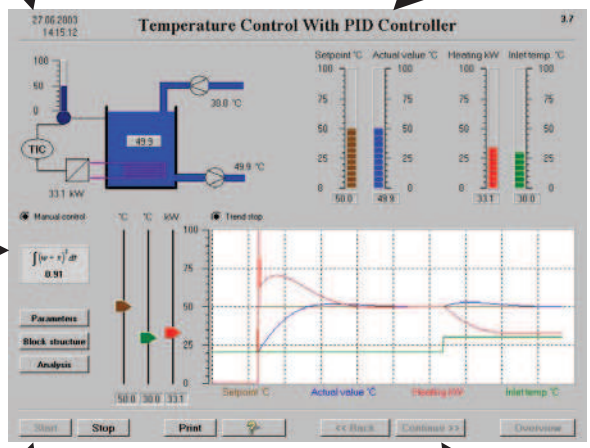
Measurement and data acquisition



Bar graphs for signal representation

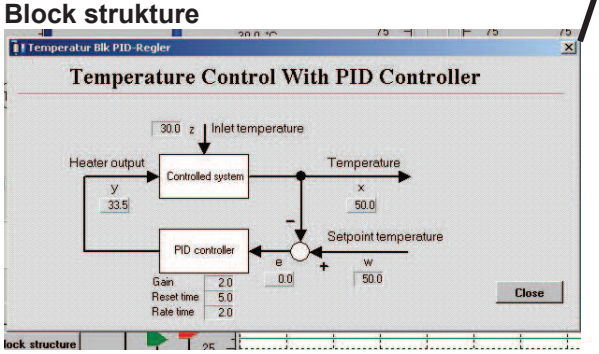
Controller parameters





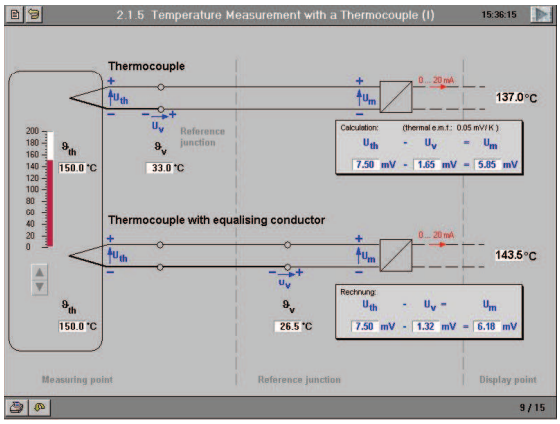
Online trend chart

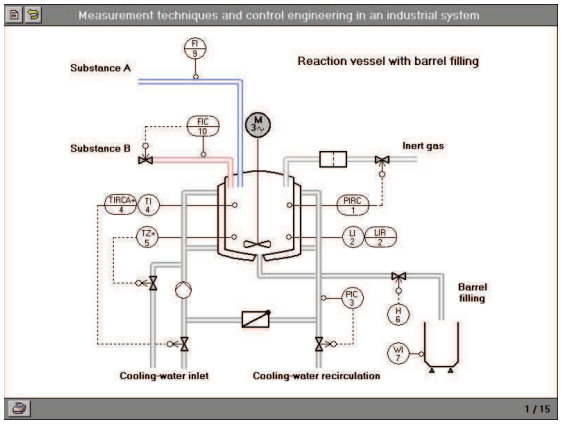
Block strukture



WinErs - Practical Training on Measurement Techniques

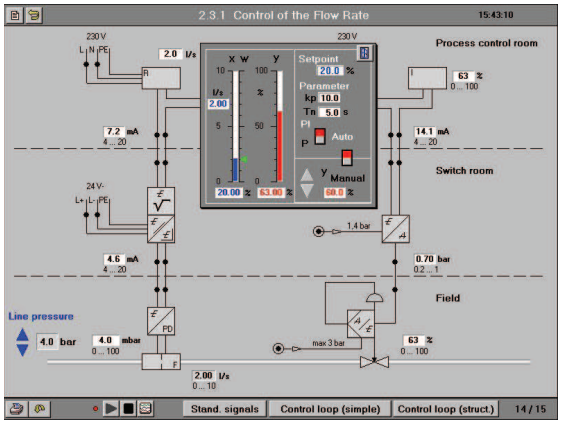
The measurement techniques training was developed for hands-on learning in the subject automation engineering. To simulate various measurement techniques the example in this program is based on a typical industrial process.



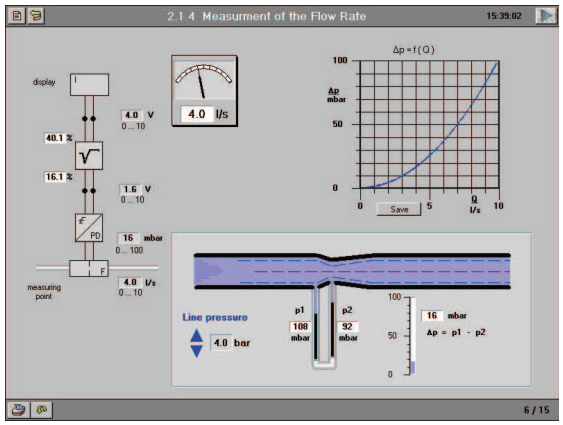


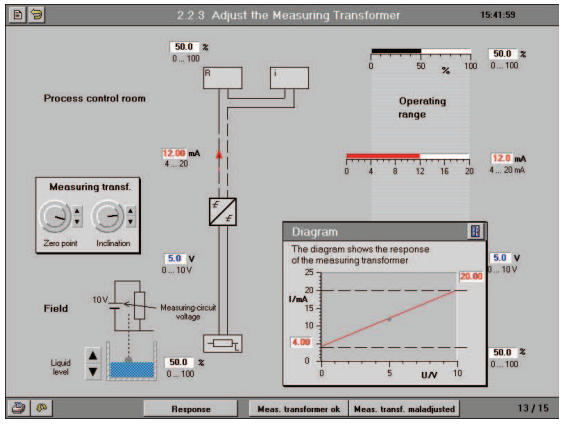
The example of an industrial process gives the possibility to examine the mode of operation of transducers for:

- liquid level
- balance power
- pressure
- flow rate
- temperature



Observe measurement value processing (e.g. sensors, transformation, display).
Visualisation is based on international standards.
All processes can be changed online at any time and process technology is documented.





Options:

- choose transducers by task
- calibrate transducer to input signals operating range
- control and parameterise in- and output signals in the control loop