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Status for process control in industry

1 Abstract

According to our experience, many of the process industries (chemical, energy, food and oil & gas) still have problems with the most basic parts of process control:

- Controller tuning
- Control strategies

Most of them, excluding refineries and similar processes, which are more complicated from a control perspective, does not have process control competence in house and neither the process engineer nor the instrument engineer takes responsibility for process control. The same is true when a process is being build or rebuild. The process engineer designs the process, uses standard control strategies for each component, and then connects the components together. The instrument engineer configures the control system using a standard set of PID-parameters for each loop. During commissioning, if a control loop is unstable, they start "guessing" the PID-parameters, but the problem is often that they use the wrong control strategy.

The consequence of this is of course higher production costs, an unstable process is less efficient, and higher maintenance costs.

By adding a few simple steps in the projects, the problems can be reduced:

- Make a specification for each vital control loop
- Let a process control engineer review the design in an early project state
- Use a process control engineer during start-up to tune the control loops
- Hold a short training in loop tuning for some of the operational personnel