Are Oscillations Making Your Process All Wet?

Optimizing Pre-Heater Water Content

It's said that too much of a good thing is a bad thing. A leading oil and gas producer learned that too much variability in their gas pre-heater was negatively impacting the platform's profitability. Unable to consistently control the process' moisture content, this producer was forced to absorb the higher costs or be at risk of raising the moisture level to a point where downstream combustion processes failed. The choices were simple: Either continue to waste resources during pre-heat unnecessarily, or take control of the situation.

LOOP-PRO™ is a unique process modeling and PID controller tuning technology. It is the only software proven capable of tuning non-steady and otherwise oscillatory process data. When applied to the platform's pre-heater process, LOOP-PRO™ quickly and accurately modeled the process. It supplied tuning parameters that permitted tight control over the process' moisture content and alleviated the need for excessive resource combustion. That process enhancement made for a good thing – a more profitable plant!

When a Picture Tells a Thousand Words

Understanding the control objective is essential to effective PID controller tuning. In the case of the platform's pre-heater, the primary objective was to reduce the control loop's Settling Time while maintaining process stability. By minimizing the Settling Time, the loop would be capable of absorbing upstream disturbances and tracking Set Point more closely.
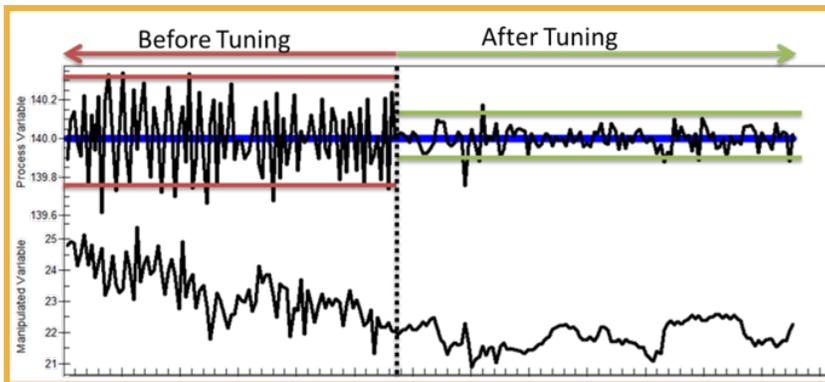
Beyond its ability to accurately model oscillatory process data, Loop-Pro™ presents complex information in a highly intuitive fashion. Once the dynamics of the pre-heater process were modeled, Loop-Pro™ simulated the controller's responsiveness. Platform staff was able to see how the controller would handle future disturbances and to customize its performance by moving a slider bar left or right. Adjustments were displayed in real-time.

At the end of the day, decisions are made by the numbers. Tuning sessions using Loop-Pro™ are thoroughly documented and include key statistics that simplify the decision-making process. For the pre-heater, the control objective was clearly met, including a significant improvement to process stability during upset conditions and a 10x decrease in process variance.

Finally – tune your facility's most complex PID control loops for optimal performance.

Learn why Loop-Pro™ is the only product that accurately models oscillatory, noisy process data. Contact us today at +1 (860) 872-2920 or sales@controlstation.com.