

CUSTOMER CHALLENGES: Excessive System Downtime

Are Your Advanced Controls Full of Hot Air?

Increasing Uptime, Reducing Cost:

In the highly competitive world of process manufacturing even the cost of steam can be an important financial consideration. Although only a source of low-density energy, waste steam is virtually free as it's collected from other industrial processes across the production environment. Compared to the typical cost of steam production, waste steam comes at a fraction of the cost of producing intermediate steam and can prove a valuable contributor to profitable plant operations.

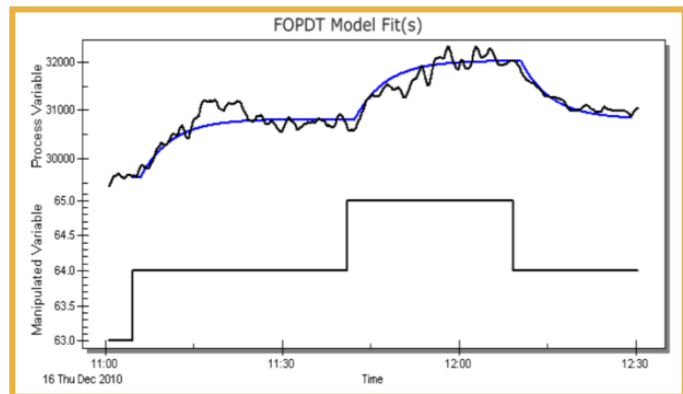
Some advanced process control strategies applied in industry look to maximize the use of waste steam. But when process upsets occur persistently a plant's uptime is put at risk. Even the most advanced control strategy can be derailed and cost considerations quickly fall by the wayside.

"We experienced frequent problems with waste steam flow control – the controller regulating the process was overly aggressive and resulted in unacceptable upsets. Each upset forced us to disable the waste steam optimization and rely on more expensive medium pressure steam. Using the software we quickly identified and corrected problems with the controller's tuning parameters. Uptime of the advanced controls has been dramatically improved."

J.M., Process Control Engineer

When a Picture Tells a Thousand Words

A leading supplier of chemicals, polymers and fertilizers actively pursued opportunities to maintain both reliable production and lower operating costs. To achieve those goals the company's plant in Indiana employed an advanced control strategy that leveraged lower cost waste steam. Unfortunately, the process' regulatory controllers were tuned too aggressively and upsets became frequent, forcing the disabling of the plant's advanced control strategy. More costly intermediate steam was regularly needed to drive the process as attempts to retune the regulatory controllers failed due to the process' complex and oscillatory dynamics.



Modeling oscillatory process data presents challenges for most software products. Control Station's software is equipped with a patent-pending innovation that eliminates the need for a steady-state condition. Modeling dynamic data and tuning controllers is a snap.

The plant applied Control Station's innovative PID diagnostic and tuning software. With it, process engineers were able to quickly and accurately model the process dynamics in spite of oscillatory behavior. From the software's analysis it was clear that the existing parameters were too aggressive and were driving the process towards upset conditions. The recommended parameters significantly increased the control loop's stability and reduced the potential for future upsets. This has allowed operations staff to utilize the less costly waste steam and regain the upper hand on production cost controls.