



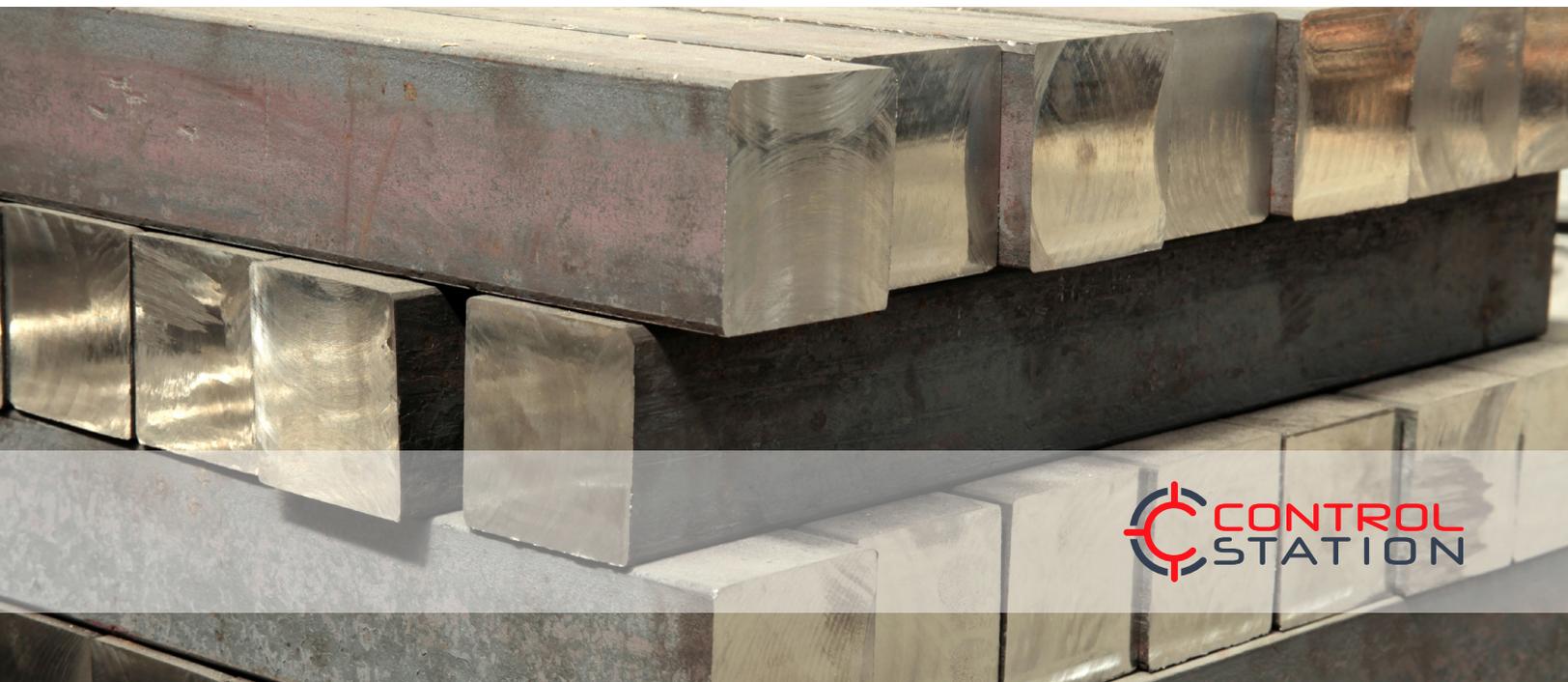
Maximizing Production and Profits Through Improved Process Control

Is Poor Control Putting Your Production On Ice?

Magnesium Elektron's (MEI) profits were being heavily impacted by an inability to control a critical production process. Excessive oscillation in the Chiller at their Flemington, New Jersey production site had cost MEI hundreds of thousands of dollars each month. In spite of best efforts to stabilize process temperature within acceptable tolerances, the company's operations staff were unable to establish the necessary level of control. MEI turned to Control Station for assistance.

First, Control Station's Solutions Engineers trained MEI's operations staff on proven best-practices for diagnosing and correcting underperforming PID controllers. Second, Control Station equipped E/I technicians with easy-to-use software tools that allowed them to quickly and accurately retune PLCs. Contrary to their original fears, Control Station's training and technology achieved improved performance by enhancing staff skills and leveraging existing process control investments.

Control Station had a profound impact on the plant's financial performance. In view of the saved production inputs alone, MEI's return on investment was achieved in one day.



“We were losing 30% of the batches produced each month. With Control Station’s help we reduced that number to a single batch lost in 2005 – one that was lost due to a plant-wide power failure.”

Challenge

Poor control over MEI’s Chiller Process had resulted in unnecessarily high loss of production output, let alone the waste of costly production inputs. Quality specifications during production of the company’s high-performance magnesium alloys required that their Chiller Process operate within a narrow band of 0.2° Celsius. However, nearly 30% of all batches slipped outside the prescribed production tolerances. With strong market demand and over \$120,000 of raw materials invested in each batch, MEI was paying a heavy toll for poor control. During one six month period, the company estimated losses in excess of \$2 million – a figure that represented the discarded production inputs alone.

In order to achieve the required level of control, MEI needed a better trained and a better equipped production team. Operators and technicians alike lacked essential knowledge of industry “best-practices” that could be applied on the plant floor and that would leverage the company’s existing control infrastructure. Those same staff also needed easy-to-use tools that could be used to quickly and consistently diagnose underperforming PIDs. It was feared that improving control would require an overhaul of the company’s current operation.

Solution

MEI looked to Control Station for expert training and innovative software technologies. Having trained staff from leading companies across the process industries, Control Station possessed the experience to improve the knowledge and skills of production staff by empowering them to:

- » Diagnose underperforming PID controllers,
- » Isolate process data for optimal modeling and tuning,
- » Evaluate corrective actions for improving control, and
- » Explore alternative and advanced control strategies

Using Control Station’s easy-to-use LOOP-PRO™ software, the company’s operators and E/I technicians had ready access to tools that could provide quick, consistent, and accurate results. Since it involved only minimal training, MEI’s staff were up and running with LOOP-PRO™ within minutes. The software enabled them to:

- » Discard disturbance-driven data that had previously hindered effective tuning,
- » Determine PID tuning parameters that were customized for their unique PLC, and
- » Assess alternative loop architectures for further process optimization.

“Control Station equipped my team with the training and tools they needed to succeed”, commented MEI’s Rick Huxel, E/I Supervisor. “They kept the training simple and straightforward, focusing on control techniques that could be applied immediately on the plant floor and delivering the material in a hands-on fashion so that the knowledge would be retained. Equally valuable, their LOOP-PRO™ software has been easy to use by our E/I Technicians.”

Huxel continued: “We were losing 30% of the batches produced each month. With Control Station’s help we reduced that number to a single batch lost in 2005 – one that was lost due to a plant-wide power failure. Today, our chiller process is typically held within a 0.05° Celsius band.”

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.

