Tuning PID Process Control Loops

Enhance your expertise in optimizing analog control applications, including Building Automation Systems (BAS) and process control loops used in commercial and industrial processes. This specialized course provides in-depth training on the adjustment of three-mode controllers, focusing on proportional, integral, and derivative (PID) tuning. These controllers are fundamental to analog automatic control. Proper tuning ensures precise and efficient operation, reducing costly inefficiencies and downtime.

Gain a thorough understanding of critical process characteristics such as dead-time and capacitance, which significantly influence control performance. Through hands-on practice using computer-based simulation software, you and your team can safely develop practical skills in a risk-free environment. This practical approach directly translates into measurable improvements in system performance, operational quality, and consistency. It also delivers a strong return on investment (ROI).

Building on foundational concepts introduced in NTT's *Instrumentation and Process Control* course, **Tuning Analog Three-Mode Control Applications** provides advanced opportunities to refine and master the tuning of three-mode control systems. This course empowers your team to achieve optimal performance in analog control applications.

WHAT THIS COURSE COVERS

- Key process characteristics such as dead-time and capacitance and their impact on performance.
- Methods for tuning proportional, integral, and derivative (PID) systems.
- How to adjust three-mode analog systems for accuracy and efficiency.
- Practical application of PID functions to achieve cost savings and improved quality.
- Hands-on training with computer simulation software for safe, real-world practice in control tuning.

COURSE OUTCOMES

- Identify and implement proper tuning techniques for optimal system performance.
- Analyze critical process characteristics and their effect on control efficiency.
- Apply PID tuning methods to enhance operational quality and reduce costs.
- Develop practical expertise through simulation to consistently improve system results.

WHO SHOULD TAKE THIS

- IT Technicians
- Instrumentation Technicians
- Maintenance Technicians
- Automation Technicians
- Multi-craft Personnel
- Anyone who needs Cross-Training on Analog Three-mode Control Loops

COURSE AGENDA

- Process Characteristics
- PID Controller Parameters
- Tuning Methods
- Advanced Controls
- Hands on Lab Exercises

☐ Lecture ☑ Hands-on • ONSITE: 2-days (16 hours) • LIVE ONLINE: N/A