Introduction to Process Control

Potential PDH: 16

Description:

This course helps field operators transition into the board operator role by introducing foundational controller concepts, including basic functions, typical modes, and common configurations. Through active participation and repetitive practice exercises, learners will apply these concepts to various systems, such as heat exchangers, single flash, and stripping operations. This course is also beneficial for newly assigned board operators who did not have the opportunity to complete formal training during their transition. Additionally, it serves as a valuable refresher for experienced operators seeking to reinforce their understanding or prepare for a mentorship role.

Outline:

1. Controller Basics
   - Elements of a Controller
   - Controller Modes
   - Concepts
   - Control Configurations
   - Controller Malfunctions
2. Material Balance
3. Heat Exchange
   - Chemistry Concepts: Heat
   - Heat Transfer Objectives
   - Control Relationships
   - Exchanger Malfunctions
   - Condensers
     - Partial/Full/Total Condensers
     - Control Relationships
     - Constraints
     - Malfunctions
     - Partial Condenser Control Matrix
     - Full or Total Condenser Control Matrix
   - Steam Heaters
     - Control Relationships

- Reboilers
  - Control Relationships
  - Constraints
  - Malfunctions
- Steam Generators
  - Control Relationships
  - Constraints
  - Malfunctions

4. Single Stage Flash
5. Stripping

Who Should Attend:

- Field operators transitioning into board operator roles
- Newly assigned board operators
- Experienced board operators seeking mentorship roles

Subject Matter Expert (SME):

Ida Soto has over 20 years of experience in process improvement, process design, and technical training with Big Five consulting firms, as well as mid-sized and small companies. She has project management experience with multi-million-dollar initiatives focused on maintaining product quality and integrity while managing budgetary and scheduling constraints and incorporating continuous improvement measures. Ida is also a skilled English-Spanish classroom instructor, experienced in applying adult learning methodologies to effectively engage diverse learners. She holds a B.S. in Chemical Engineering from the University of Puerto Rico and an M.S. in Chemical Engineering from the University of Houston.