

EXPERION PKS: ADVANCED – C300 PROCESS CONTROL TECHNIQUES IMPLEMENTATION

COURSE OVERVIEW

Course Number: EXP-1025

Course Duration: 5 Days

Prerequisite Course (s): EXP-2001C3

This hands-on course provides process control engineers a thorough grounding in the conventional and advanced control techniques, with emphasis on how to put theory into practice. A variety of life-like plant simulations are provided.

The course is based on algorithms in C300 Controller

COURSE DELIVERY OPTIONS

- Instructor-Led Training (ILT)
- Virtual Instructor-Led Training (VILT)

COURSE OBJECTIVES

- Process Dynamics
 - Gain, Deadtime and Lag
 - Deriving Process Dynamics
- Digital Filtering
 - How filtering works
 - Tuning the Honeywell filter
- Control Algorithms and Tuning
 - Feedback Control
 - PID Control
 - Trial and error tuning
 - Setup and tuning Cascade loops
 - Open-loop Tuning
 - Opertune
- Level Control
 - Types of level control
 - Tight level control
 - Averaging level control
- Adaptive Control
 - PID
 - Gain scheduling 2 band
 - Gain scheduling 3 band
 - Programmed Adaptive
- Feedforward
 - Types of feedforward
 - Ratio Control
 - Tuning feedforward (variable deadtime/lead/lag block)
 - Furnace Control
- Profit Loop Algorithm
 - Setup
 - Uses
 - Tuning
- Reset Windup
 - Rest windup phenomenon in Honeywell
 - Anti Reset windup protection
 - External anti Reset windup using PIDER block
 - PIDER Vs PID block. Feature difference.
 - Achieve Bumpless transfer in control loop design