

Inferential Modelling with Profit SensorPro



Course Overview

Course number: 4522

Course length: 3.5 days

More than 90% of APC installations in the Oil & Gas industry use some kind of inferential model in conjunction with multivariable predictive control.

This course provides a fundamental understanding of the design and implementation of Steady State Inferential Models also referred to as Soft Sensors.

Basic data analysis concepts and statistical metrics are covered with particular emphasis on the practical application of regression models. The following types of regression models are presented:

- Ordinary Least Squares, Robust Regression, Principle Components Regression and Partial Least Squares Regression.

Extensive hands-on use of the Profit[®] Sensor Pro software to develop regression models with a variety of different data sets result in thorough understanding of the important features of the technology. The step-by-step procedure required for the successful installation of the on-line Inferential Model and integration with Profit Controller on the NT/W2K platform is also presented. Examples on how to implement an inferential model with feedback from an on-line analyser will be demonstrated.

Course Benefits

Implement an Inferential Model (Soft Sensor) from A to Z

- Gain theoretical knowledge of data analysis and different regression techniques and experimental design.
- Learn about cutting edge technology for soft sensor modelling such as PLS.
- Gain the basic skills required to design an inferential model and implement the model on-line using Profit Sensor Pro technology and software.
- Learn how monitor and maintain the inferential model to achieve good performance for your APC solution.

Course Delivery Options

- In-Center Instructor-Led Training.
- On-Site Instructor-Led Training.

Who Should Take This Course?

- Customers responsible for or involved in implementing inferential models to either complement or replace on-line analysers.

Prerequisite/Skill Requirements

Prerequisite Course(s)

- None.

Desirable Skills and/or Experience

- Understanding Basic Process Control.
- Engineers with 2-5 years process control experience.
- Knowledge of modelling and some exposure to process dynamics.
- Basic understanding and acquaintance with statistics.
- Hands-on experience with Profit Suite Applications and Profit Design Studio will be helpful.

Course Topics

Participants will learn how to...

- Extract reliable models out of process and lab data.
- Use basic statistical metrics to determine model quality and predictability.
- Implement a model on-line, and subsequently monitor the inferential over longer time for performance and validation.

Additional Information

For additional information, please contact automationcollege.hpsemea@honeywell.com.