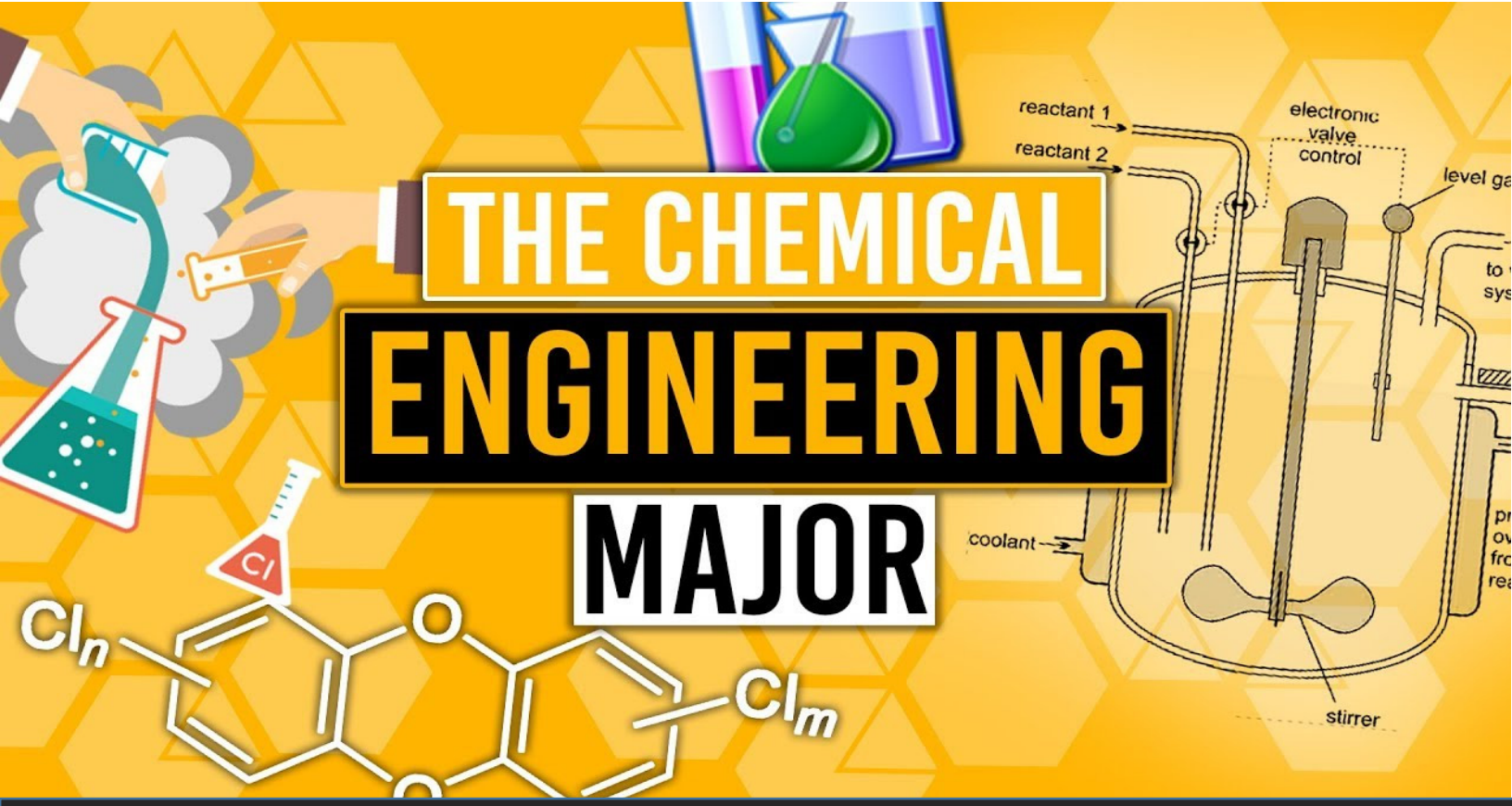

Control Optimization and Tuning of Furnaces, Boilers and Steam Plants

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BTS
Training & Consultancy

Control Optimization and Tuning of Furnaces, Boilers and Steam Plants

Introduction:

With energy costs rising, steam production has become a major cost center for the manufacturing industry. In order to improve profitability, plants have reduced the amount of vented or condensed steam and have reduced the number of boilers in operation. Although "closing" the steam system improves the efficiency of a plant it also increases the variability in steam quality leading to possible process operation issues.

The different control strategies and process dynamics found in typical steam plants and combustion units will be discussed. You will learn to make a steam control system more integrated, responsive, robust and energy efficient.

Objectives:

After participating in the course, you will be able to:

- Understand the tuning procedures for PID controllers
- Apply applications of advanced regulatory controls in a steam plant
- Know the impact of thermodynamics and steam system design on the controllability of a steam plant
- Identify the shrink-swell effect and how to tune a boiler drum level controller
- Understand the design and tuning of the plant master controller and steam header pressure controller

Who Should Attend?

Process Engineers • Control Engineers • Instrumentation personnel • Facility/Utility Engineers • • Consulting Engineers • Technicians and Technologists

Contents:

- Steam plant and boiler overview
- Steam system dynamics
- Fundamentals of PID tuning for steam systems
- Introduction to advanced controls
- Combustion control, cross-limiting logic
- Boiler drum level tuning
- Steam header pressure and plant master control