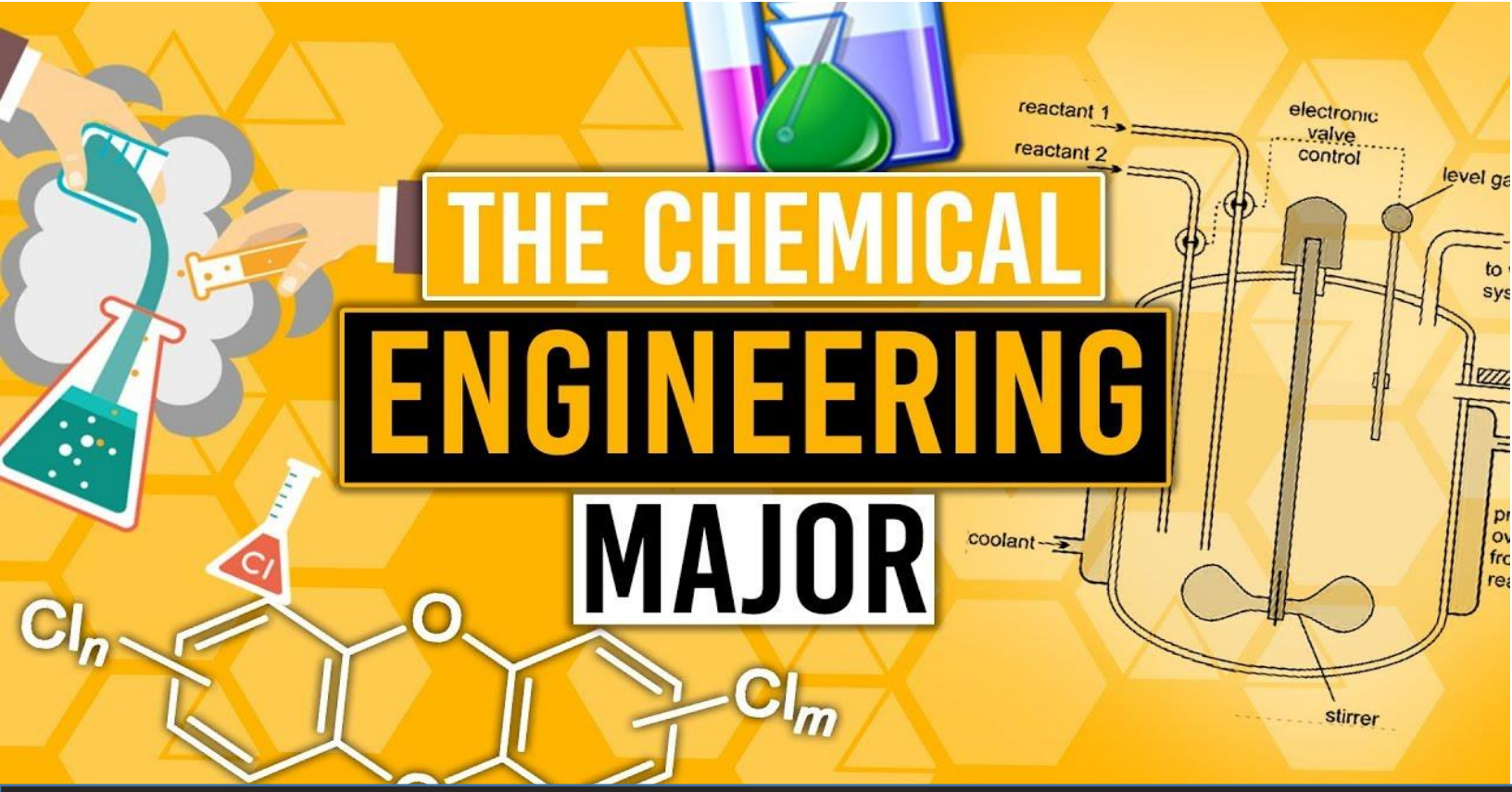

Multiphase Flow

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BTS
Training & Consultancy

Multiphase Flow

Introduction:

This course will teach participants about the single phase fluid and how to do the basic calculations of pressure drops. They will also learn how to do pressure drop calculations for multiphase flow, flow pattern prediction, sluggish considerations, and transient flow. The knowledge will be used to correctly size the pipelines will minimize the operational problems in the production system.

Participants will also be introduced to Pipesim and will experience a simulation of multiphase flow operational considerations for the transport of production fluids.

Who Should Attend?

- Production Engineers
- Facilities Engineer

Course Agenda:

Day 1

- General Fluid Flow and Single Phase Flow
- Fluid flow definitions
- Single phase fluid and velocity in a pipeline

- Pressure drop equations and correlations
- On the first day, participants will be given a quick introduction to fluid flow including definitions. Single phase fluid, fluid velocity in a pipeline, and single phase pressure drop equations and correlations will be discussed.

Day 2

- Multiphase Flow
- Concept and definitions
- General and simplified equations
- Flow patterns and pattern maps
- Day two of this course will focus on multiphase flow. Concepts, definitions, flow patterns, and general and simplified equations will all be covered on this day. Flow pattern maps and pressure drop correlations will also be discussed.

Day 3

- Multiphase Flow (Cont.)
- Mechanistic models
- Comparison of pressure drop estimation methods
- Transient multiphase flow models
- The third day will continue the discussion of multiphase flow. Mechanistic models and the comparison of pressure drop estimation methods will be covered. Participants will also learn about transient multiphase flow models before participating in class exercises.

Day 4

- Operational Considerations and Metering of Multiphase Flow
- Operational considerations
- Type of corrosion under multiphase flow
- Multiphase flow metering
- Day four will cover operation considerations, types of corrosion under multiphase flow and how to control it, as well as the different technologies, principles, and applications of multiphase flow metering.

Day 5

- Fluid Flow Simulator: Pipesim
- Fluid flow simulator
- Workshop
- The last day will be completely about the Fluid Flow Simulator that will introduce participants to Pipesim. After this attendees will participate in a workshop.