Training - Applied Chemical Engineering to Oil, Gas and Chemical Fields - Module 2

GENCHI2-EN-P | Face-to-face only | 3 days

This course provides a more in-depth knowledge on the operation and operating conditions of the material and processes in refining, petrochemical and heavy chemistry sites as well as a strong foundation in the use of process simulation software

Level

Expert

Public

- Engineers and technicians whose activities are related to the operation of industrial sites: production, maintenance, plant projects, process control, laboratory, engineering, R&D, etc
- Every type of activities is concerned: refining, petrochemistry, heavy chemistry, engineering

Objectives

Attendees will be able to implement the following skills:

- Specify the principles of chemical engineering governing the operation of equipment

Pedagogical & technical resources

- Specific and original documentation covering different topics from an applied angle
- Numerous applications and case studies related to industrial situations
- Data, diagrams, graphs, various correlations presented in one single ring binder for easy reference after the course

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

MODULE 1: LIQUID-VAPOR EQUILIBRIA, DISTILLATION & PRELIMINARY DESIGN (GENCHI1-EN-P) — **3 days**

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MODULE 2: FLUID FLOW & ROTATING EQUIPMENT — 3 days

Thermodynamics applied to rotating equipment.
Fluid flow:

- Characteristics of the single-phase liquid and gaseous flows.
- Flow rate measurement with measuring devices.
- Determining pressure drops in sites, influence of the valves.
- Characteristic curve of a circuit, examples of typical circuits.
- Liquid-gas two-phase flow map.

Pumping and compression:

- Functions and elements of the main rotating equipment.
- Operation of the centrifugal pumps and characteristic curves.
- Connections pump-circuit. Adjustment to the operating conditions: changes in the flow rate, the product, temperature, cavitation.
- Gas behavior during compression.
- Operation of reciprocating and centrifugal compressors.
- Adjustment to the operating conditions: change in the efficiency, operating limits.

MODULE 3: HEAT & ENERGY TRANSFER (GENCHI3-EN-P) — 4 days

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com

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