

Formation - Process Engineering - Equipment Sizing



PIDE-EN-P



Présentiel



5 jours

This course provides an overview of Oil & Gas projects engineering studies, from conceptual design to detail drawing

Niveau

Perfectionnement

Public

Process engineers

Objectifs

Attendees will be able to implement the following skills:

- List the various aspects of project engineering to be applied in real cases
- Be able to work with PID schemes

Pédagogie & ressources techniques

- Lectures with exercises
- Project by team (2 or 3 students): conception of a PID scheme from a PFD
- Specific and detailed documentation, industrial examples

Évaluation des acquis

- 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

Prérequis

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

Programme

PROJECT DEFINITION

0.5 day

Definition of the different type of projects.

Planning, description of the different project steps.

Organization: task force or conventional.

Departments description and role: purchasing, cost control, planning, engineering, construction...

Relation between client and contractor: progress report, change order...

ENGINEERING DIAGRAMS (PID'S)

2 days

Process flow schemes: purpose, available information.

General rules for the PID's conception:

- PID's importance during the contract.
- Milestones: PID's review...
- Potential development, "clever PID's".

Study of the PID's by splitting them in elementary parts (each part is made of one or several equipment): fractionation column, furnace, reactors, compressors...; piping; regulation, instrumentation will be studied in each part.

Safety elements: safety valves, valve action per air failure.

Utilities, start-up and shutdown piping: steam/condensate networks, hot oil, drain systems.

Other auxiliary piping: off-spec., start-up and shutdown piping.

ENGINEERING RULES & STANDARDS

2 days

Units and conversion factors.

Hydrocarbon properties.

Equipment design rules: rotating machines (compressors, pumps...); thermal equipment (furnaces, heat exchangers); storage tanks; pressure vessels.

Piping design as per the fluid inside: gas, subcooled liquid, boiling liquid...

Instrumentation: control valves, on-off valves, flow meters, indicators...

RELIEF SYSTEM DESIGN BASIS

0.5 day

Definition of risks.

Flare stack and flare main header and sub-headers design.

Safety valves design.

Emergency shut down diagram.

Depressurization.

PROJECT (TREATED ALL ALONG THE COURSE)

Conception of a PID from a process flow scheme. Application of rules for sizing piping and pieces of equipment.

IFP Training est référencé au DataDock. Rapprochez-vous de votre OPCO pour connaître les possibilités de financement de cette formation.
Pour vérifier l'accessibilité de cette formation à une personne en situation de handicap, contactez notre référent à l'adresse suivante :
referent.handicap@ifptraining.com