

Training - Safety in Plant Operation



SECOP-EN-P



Face-to-face only



4 days

This course provides trainees with a better understanding of product and equipment risks in order to ensure safe operation

Level

Knowledge

Public

Operating personnel (operators, panel operators, shift leaders, engineers) in refineries and petrochemical/chemical plants; any staff involved in operations (maintenance, SHE department)

Objectives

Attendees will be able to implement the following skills:

- Identify risks related to products used on a facility
- Identify the recommended preventive measures in view of the importance of the risk
- Order the different phases of the provision of a facility

Pedagogical & technical resources

- E-learning modules before the training to learn & refresh knowledge about risks
- Workshop: preparation of shutdown, decommissioning or/and commissioning, start-up procedure for a typical unit
- Case studies and analysis of incidents and accidents

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

Responsible

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

OPERATIONS & HSE

0.25 day

Hazards and risks incurred. Consequences.
Risk management means: equipment, organizational and human aspects.

MAIN HAZARDS OF HYDROCARBON PROCESSING

0.75 day

Flammability: flame ignition and propagation principles. Types of combustibles, oxidizers and most common ignition sources in process facilities.

Toxicity: exposure limits. Specific hazards associated to H₂S. Use of Safety Data Sheet (SDS).

Fluid behavior and related hazards: vessel pressure, consequences of temperature variation (thermal expansion, vaporization, vacuum, water hammer).

SAFETY IN PROCESS OPERATIONS

2.75 day

Precautions and risks related to the use of utilities: inert gases, liquid water, steam, air, gas oil, fuel gas.

Safety related to blowdown and drainage toward: flare, slops, tanks, oily water...

Blinding (lockout/tag-out) procedures: conditions for installing blinds or spades.

Degassing-inerting: steam, nitrogen, water, vacuum...

Works permits: different types and use.

Entry into vessels. Atmosphere analysis: oxygen content, explosivity, toxicity.

Start-up: checks, accessibility and cleanliness, line up, nitrogen, water, steam or vacuum deaeration.

Tightness testing; commissioning and start-up.

HANDS-ON ACTIVITIES ON A TYPICAL UNIT DECOMMISSIONING

Case study, common thread of this training, used as a workshop with different groups of trainees in order to apply the different topics for decommissioning and commissioning & Start Up. Procedure writing with instructions for each step. Presentation to the group, sharing & discussions. Lessons learned.

IMPLEMENTATION OF THE PRINCIPLES & GUIDELINES

Preparation of shutdown, decommissioning or/and commissioning, start-up procedure for a typical unit.

Common thread throughout the training, carried out sequentially during the session, in order to increase mutual understanding of decommissioning principles. Lessons learned.

HUMAN BEHAVIOR & SAFETY MANAGEMENT

0.25 day

Human factors. Safety barriers, compliance with procedures, risk of routine.

Employees' involvement: commitment and responsibility.

Available tools to improve safety: procedures, risk assessment, safety meetings, accident investigation and reporting, audits, field observations, emergency drills.

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