Training - Flare Network Design Engineering

FLARE-EN-P | Face-to-face only | 5 days

This course aims to acquire a detailed understanding of relief systems and flare network, as well as the technology of main equipment involved and monitoring basics

Level

Knowledge

Public

Managers, engineers and technicians looking for technical information and understanding of flare network in Oil & Gas production facilities

Objectives

Attendees will be able to implement the following skills:

- Provide technical knowledge and practical approach of relief system and flare network in Oil & Gas processing facilities, as well as the technology and operating principle of the equipment used in these facilities
- Review the basics of Oil & Gas field protection against overpressure
- Detail the available process technologies allowing to respect reject regulations
- Select and size the key components of those networks
- Describe the technology of the main equipment used

Pedagogical & technical resources

- Numerous application exercises inspired from actual Oil & Gas production facilities
- Design practice on Aspen Flare System simulator

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

OVERVIEW OF TYPICAL RELIEF & FLARE SYSTEMS — 0.5 day

Codes and standards typical in Oil & Gas facilities.
Safety implications and causes of overpressure.

Overpressure source:

- Protection philosophy.
- Source isolation.
- Relief.

Environmental regulation and standards.

MECHANICAL SPECIFICATION OF PRESSURE VESSELS & HEAT EXCHANGERS — 0.75 day

Vessels codes and standards.
Material selection.
Metallurgy, heat effect and corrosion mechanism.
Design calculation for pressure vessels and heat exchangers.
Vessel integrity, evaluation according to the Oil & Gas standards.

RELIEF GAS SYSTEM OVERVIEW — 0.75 day

System equipment and components.
Relief gas parameters and process safety management.
Monitoring systems and procedures.
Blow down:

- Purpose.
- Operational consideration.
- Design and specification.

FLARE SYSTEM — 1.5 days

Flare gas recovery, smokeless flaring and purge gas conservation.
Defining need and quantity of purge gas.
Selection and design of key components:

- KO drum, vent and flare stack, vent and flare tips.
- Flare ignition systems.

Thermal oxidizers:

- Principle of operation.
- Components and equipment.

Radiation calculation.

CASE STUDY: FLARE SYSTEM SIZING — 1.5 days

Study of an existing plant.
Introduction to Aspen Flare System.
Design of the relief gas system and the corresponding flare network using Aspen Flare System.

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