FLARING SYSTEM OPERATION PRD061

COURSE DESCRIPTION

This course is designed to provide participants with a thorough understanding of the key components, design requirements, and environmental considerations involved in the operation of flare systems in the oil and gas industry. Over the span of five days, attendees will gain insights into both onshore and offshore flare systems, including detailed knowledge of flare gas recovery systems, relief valves, blowdown processes, and flare stack design. The course will culminate with an examination of environmental impacts, emphasizing the importance of minimizing CO2 emissions and ensuring smokeless flaring.

COURSE OBJECTIVES

By the end of this training course, participants will be able to:

- Identify and describe the components of a flare system.
- Understand the differences between onshore and offshore flare systems.
- Design and select appropriate flare systems based on specific requirements and scenarios
- Size relief valves and headers accurately to ensure safe and efficient operation.
- Implement emergency depressurization systems and sequential blowdown procedures
- Consider environmental factors, including flare radiation and noise levels, in the design and operation of flare systems.
- Explore methods to achieve smokeless flaring and reduce global warming impacts.
- Utilize available resources for continued learning and improvement in flare system operation.

WHO SHOULD ATTEND

- Engineers and technical personnel involved in the design, operation, and maintenance of flare systems in the oil and gas industry.
- Environmental specialists focused on the impact of flare operations.
- Safety professionals aiming to enhance their knowledge of flare system safety and emergency procedures.
- Project managers overseeing oil and gas production projects.
- Any professional seeking a deeper understanding of flare system operations and environmental considerations.

COURSE DURATION

5 Working Days

COURSE OUTLINES

1. Course Introduction
    - Overview of the course objectives and what participants will learn.
    - The oil and Gas production system and key components.
2. Flare System Component
    - Typical components of a Flare System
    - Onshore and Offshore Flare Systems
    - HP or LP Flare (Segregation of Flare Headers).
    - Flare Gas Recovery System
3. Flare System Concept Design and Selection
    - Typical Flare System Design Considerations
    - Flare & Blowdown Philosophy
    - Flaring Scenarios
    - Flow Rate and Header Sizing
    - Relief line sizing, sub-header and header sizing.
4. Relief Valves & Blow Downs
    - Types of Relief Valves
    - Sizing of relief valves
    - Emergency Depressurization Systems
    - Sequential Blowdown.
    - Flare headers Temperature , MDMT and Materials
5. Flare Knock Out Drum & Flare Tip
    - KOD Drum Primary Duty
    - Flare Stack Design Considerations
    - Flare KO Drum Level Instrumentation&Pumps.
    - Flare Tip types & Design
    - Flare Seal Drum types, Functions
    - Flare Ignition Systems.
    - Flare Purging.

6. Environmental Considerations

- Flare Radiation.
- Global Warming & CO2 emissions.
- Smokeless flaring.
- Noise level .