



External Training Course

Firefighting System Design & Review for Oil and Gas Industry

From 22 Jul. To 26 Jul. 2024
From 23 Sep. To 27 Sep. 2024
From 25 Nov. To 29 Nov. 2024

**Doubletree by Hilton Los Angeles Downtown
Los Angeles, United States of America**

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External Training Course:

**Firefighting System Design & Review for
Oil and Gas Industry**

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Fees: 2500 KD

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Course Overview:

There are many hazardous fluids & gases present or generated in oil & gas plants or refinery units. These fluids & gases can be flammable or inflammable in nature and can cause fire. To prevent fire from happening, the facility is to be protected with some fire protection system that is provided based on the hazardous nature of the fluids & gases in order to prevent a catastrophic loss of people, facilities and equipment. Firefighting system design in plants are essential to provide and enhance firefighters to deal more effectively with fire. This training course will cover firefighting system and design criteria in oil and gas plants referring to The National Fire Protection Association (NFPA) standard covers:

- Design and calculation fire protection system
- Fire safety assessment
- Fire water system designed to meet the fire water flow requirement
- Inspection, test and maintenance fire protection system

This training course will develop the participants' abilities and skills to design, review and test firefighting system to mitigate risks and help prevent disasters in facilities - destroying the assets and causing pollution to the environment & fatality to human life. Participants attending this Firefighting System Design & Review for Oil and Gas Industry training course will develop the following competencies:

- Fire safety assessment with rating system calculation.
- Fire water system with design and calculation.
- Sprinkler system included design and calculation.
- Fire protection system and maintenance.

Learning Objectives:

This training course aims to help participants to develop the following critical objectives:

- Understanding the design for fire protection system in refineries, with reference to NFPA.
- Be able to design and calculation fire protection system.
- Be able to perform fire safety assessment.
- Be able to inspection, test and maintenance fire protection system.
- Be able to review fire protection system.

Training Methodology:

This training course will utilize a variety of proven adult learning techniques to ensure maximum understanding, comprehension, and retention of the information presented. Includes stimulating presentations supporting each of the topics together with interactive trainer lead sessions of discussion. There will also be practical sessions where participants can practice and experience course-related activities. Practical and fun exercises, short video presentations, small group work, and feedback will be used to facilitate learning.

Course Outline:

Day 1: Firefighting System in Petroleum Refinery

- Introduction firefighting system (passive and Active systems).
- The key elements of active and passive fire protection.
- Designing passive and active fire protection systems.
- International fire design codes NFPA.

Day 2: Fire Safety Assessment

- Fire risk.
- Fire design.
- The Performance based fire safety design.
- Fire rating systems and calculation.
- Fire testing.

Day 3: Fire Water System in Oil and Gas

- Fire water demand calculations.
- Firewater network design calculations.
- Fire water suppression system.
- Fire water storage.
- Fire water pumps.

Day 4: Sprinkler System in Oil and Gas Plant

- Type of sprinkle systems.
- Sprinkler system design.
- Sprinkler design calculations.
- Sprinkler system inspection, maintenance and testing.

Day 5: Fire Protection System

- Hydrocarbon tank fire protection and design calculations.
- Hydrocarbon processing plant and design calculations.
- Maintenance and test stand pipe system.
- Maintenance and test fire alarm system.