

FIRE SAFETY AND EXPLOSION RISK IN REFINERIES

Start Date:	02/11/2026	End Date:	06/11/2026
Categories:	Oil & Gas	Venues:	Paris
Formats:	In Person	Instructors:	

OVERVIEW

This course addresses fire hazards and explosion risks in refinery environments. It provides participants with the knowledge to prevent, detect, and respond to fires and explosions through proper engineering controls, emergency planning, and compliance with international safety standards.

OBJECTIVES

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

- Identify fire and explosion hazards common to refinery operations.
- Evaluate fire risk using consequence modeling and hazard analysis tools.
- Implement fire protection and suppression systems effectively.
- Develop refinery-specific emergency response and evacuation plans.
- Ensure compliance with NFPA, API, and OSHA fire safety standards.

COURSE OUTLINE

1. Fire and Explosion Hazards in Refineries: Causes and Case Studies
2. Risk Assessment and Hazard Modeling Techniques
3. Fire Detection, Suppression, and Control Systems
4. Emergency Response Planning and Fire Drills
5. Standards, Auditing, and Continuous Improvement

TARGET AUDIENCE

Refinery safety personnel, fire protection engineers, operations managers, and emergency response coordinators responsible for fire safety and hazard control.

METHODOLOGY

Scenario analysis, hazard modeling exercises, equipment walkthroughs, and emergency simulation drills.

CONCLUSION

Participants will be equipped to manage fire and explosion risks proactively, ensuring personnel safety and regulatory compliance in refinery operations.

DAILY AGENDA

Day 1: Fire and Explosion Hazard Landscape

Exploring flammable materials, ignition sources, and real-world refinery incidents.

Day 2: Risk Modeling and Assessment Tools

Quantitative and qualitative tools for fire and explosion risk analysis.

Day 3: Detection and Protection Systems

Design and operation of fire alarms, suppression, foam systems, and firewater networks.

Day 4: Emergency Response and Coordination

Refinery fire drills, command roles, evacuation protocols, and resource management.

Day 5: Compliance and Continuous Improvement

NFPA/API/OSHA alignment, auditing practices, and long-term safety performance tracking.

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