Advanced Process HAZOP

Venue Information

Venue: London UK

Place:

Start Date: 2026-02-17

End Date: 2026-02-21

Course Details

Net Fee: £4750.00

Duration: 1 week

Category ID: STC

Course Code: STC-4

Syllabus

courses Syllabus

Introduction

For companies to thrive, proactive risk management is essential. In recent years, both companies and legislators worldwide have increasingly emphasized Process Safety to mitigate risks in hazardous industries. Process Hazard Analysis (PHA) plays a pivotal role in implementing effective risk management systems. As Hazard and Operability (HAZOP) studies gain global recognition as the preferred qualitative risk assessment methodology in the Process Industries, this courses will provide a focused exploration of this aspect of Process Hazard Analysis.

In this training, participants will learn:

- Advanced risk assessment techniques application
- Mechanics of dispersion, fire, explosion, and toxic releases
- Concept of Quantified Risk Assessment (QRA)
- Hazard and Operability (HAZOP) study methodology

By the end of the courses, participants will be able to:

- Understand Risk Assessment and Risk Management concepts
- Evaluate risks qualitatively, semi-quantitatively, and quantitatively
- Identify and analyze hazards using various techniques including Check-Lists, Risk Profiling, HAZOP, FMEA, and Task-Based Risk Assessment
- Perform Cause-Consequences Analysis utilizing Fault Trees and Event Trees for accident prevention
- Recognize the benefits and limitations of HAZOP studies
- Fulfill the roles of Team Leader, Facilitator, Scribe, and team members during HAZOP studies
- Conduct a HAZOP study effectively

courses Contents

Day One: Introduction to Risk Assessment

- Understanding hazards, risk, and risk assessment concepts
- Methods for risk evaluation
- Integrating risk assessment within Risk Management
- Qualitative, Semi-Quantitative, and Quantitative Risk Assessment methodologies

Day Two: Risk Assessment Techniques: HAZOP

- Introduction to hazard identification and analysis techniques
- HAZOP: Techniques, requirements, and application scenarios
- HAZOP team composition and guide words utilization
- Syndicate exercise: Applying HAZOP to relevant processes

Day Three: HAZOP Leadership Techniques

- Requirements for HAZOP team leader/facilitator and scribe
- Effective facilitation of HAZOP studies: best practices
- Information prerequisites for successful HAZOP studies
- Case study: Participant-led HAZOP meeting simulation
- Review of commercial software for HAZOP and Management of Change (MOC)

Day Four: Consequence Analysis

- Theory behind fire, explosion, and toxic dispersion modeling in Quantitative Risk Assessments (QRA)
- Effects of different types of fires and explosions on people and equipment
- Review of software tools for consequence calculations

Day Five: The Role of QRA

- Societal and Individual Risk considerations
- Review of software for Quantitative Risk Assessments
- Programme review and future prospects