Advanced Process HAZOP Training

Venue Information

Venue: London UK

Place:

Start Date: 2025-07-14

End Date: 2025-07-18

Course Details

Net Fee: £4750.00

Duration: 1 Week

Category ID: STC

Course Code: STC-16

Syllabus

Course Syllabus: Process Safety and Hazard Analysis at Skilllinkx

Introduction

In today's industrial landscape, proactive risk management is crucial for any company's success. Recognizing the importance of process safety, many companies and legislators have focused on Process Hazard Analysis (PHA) as a key strategy to mitigate risks in hazardous industries. Hazard and Operability (HAZOP) studies are globally acknowledged as the preferred qualitative risk assessment method in the process industries. This course will delve into advanced risk assessment techniques, the mechanics of hazardous releases, and the intricacies of HAZOP and Quantified Risk Assessment (QRA).

Objectives

- Master advanced risk assessment techniques.

- Apply risk assessment and risk management principles effectively.
- Evaluate risks using qualitative, semi-quantitative, and quantified methodologies.
- Identify hazards and analyze risks using techniques like HAZOP, FMEA, and Task-Based Risk Assessment.
- Conduct cause-consequence analysis using Fault Trees and Event Trees.

Course Contents and 5-Day Plan

Day One: Introduction to Risk Assessment

- **Key Concepts**: Understand hazards, risk, and risk assessment.
- **Methods for Risk Evaluation**: Explore various techniques for evaluating risks.
- **Integrating Risk Assessment within Risk Management**: Learn how to incorporate risk assessment into broader risk management frameworks.
- **Risk Assessment Methodologies**: Differentiate between Qualitative, Semi-Quantitative, and Quantitative Risk Assessment (QRA) methods.

Day Two: Risk Assessment Techniques: HAZOP

- **Introduction to Hazard Identification and Analysis Techniques**: Gain insights into various methods for identifying and analyzing hazards.
- **HAZOP Methodology**: Learn the principles and applications of HAZOP.
- **Team Composition for HAZOP Studies**: Understand the roles and responsibilities of HAZOP team members.
- **Guide Words and Process Variables in HAZOP**: Learn the specific terms and variables used in HAZOP studies.
- **Syndicate Exercise**: Apply HAZOP to relevant processes through a practical exercise.

Day Three: HAZOP Leadership Techniques

- **Requirements for HAZOP Team Leaders/Facilitators**: Learn the necessary skills and knowledge for leading HAZOP teams.
- **Role of HAZOP Scribe**: Understand the importance and responsibilities of the scribe in HAZOP studies.
- **Facilitating HAZOP Studies**: Best practices, do's and don'ts for facilitating effective HAZOP studies.
- **Information Required for Successful HAZOP Studies**: Identify the necessary data and information needed.
- **Case Study**: Each delegate has the opportunity to facilitate a HAZOP meeting.
- **Commercial Software for HAZOP and Management of Change (MOC)**: Review available software tools for HAZOP and MOC.

Day Four: Consequence Analysis

- **Types of Explosions and Their Effects**: Learn about various explosions and their impacts on people and equipment.
- **Software for Consequence Calculations**: Review the tools available for calculating the consequences of hazardous events.

Day Five: The Role of QRA

- **Introduction to Quantified Risk Assessment (QRA)**: Understand the principles and applications of QRA.
- **Event Tree Analysis (ETA) for Scenario Development**: Learn how to use ETA for developing scenarios.
- **Fault Tree Analysis (FTA) for Multi-Causation Analysis**: Understand how to use FTA for analyzing multiple causes of hazardous events.
- **Applications for ETA and FTA**: Explore practical uses for these analytical methods.
- **Failure Data for QRA**: Understand the importance of failure data in QRA.
- **Societal Risk and Individual Risk**: Differentiate between societal and individual risk.
- **Software for Quantitative Risk Assessments**: Review available tools for conducting QRA.
- **Programme Review and the Way Ahead**: Summarize the course content and discuss future directions.

By the end of this comprehensive 5-day course, delegates will be equipped with cutting-edge skills and knowledge in process safety and hazard analysis, enabling them to lead and implement effective risk management strategies within their organizations.