SCANDINAVIAN ACADEMY

For Training and Development

Mobile | 0046700414979 : Mobile | 0046114759991 : Phone : 0046700414959
Email | info.en@scandinavianacademy.net Web site:https://scandinavianacademy.net/en :
Sweden - Norrköping - Timmermansgatan100 | P.O.BOX : 60359

Course: Advanced Process HAZOP

Code	City	hotel	Start	End	price	Hours
198	Stockholm (Sweden)	Hotel Meeting Room	2024-10-14	2024-10-18	5450 €	25

Introduction

It is universally recognised that for any Company to succeed it must take a proactive approach to risk management. Over the last few years Companies and a number of Countries legislators have been focusing on Process Safety as a method to reduce the risks posed by hazardous industries. Process Hazard Analysis (PHA) is recognised as being a critical tool in the implementation of a successful risk management system.

As Hazard and Operability (HAZOP) studies are now recognised world-wide as being the qualitative risk assessment methodology of choice in the Process Industries, there will be additional focus on this specific aspect of Process Hazard Analysis.

In this programme the delegates will learn:

- How to apply advanced risk assessment techniques
- Mechanics of dispersion, fire, explosion and toxic releases
- The concept of Quantified Risk Assessment “QRA”
- Hazard and Operability (HAZOP) study methodology
- HAZOP team leadership

Objectives

Delegates attending this programme will:

- Understand the concepts of Risk Assessment and Risk Management
- Understand the estimation and evaluation of risks - Qualitative, Semi-Quantitative

and Quantified Risks
- Techniques for Hazard Identification and Analysis - Check-Lists, Risk Profiling, HAZOP, FMEA and Task-Based Risk Assessment
- Cause-Consequences Analysis - The Role of Fault Trees and Event Trees in Accident Prevention
- Understand HAZOP studies their benefits and their short comings
- Understand the requirements of a Team Leader or Facilitator, scribe and team members during HAZOP studies
- Be able to facilitate a HAZOP study

Training Methodology

Participants will learn by taking part in exercises, syndicate and group workshops, as well as looking at case studies and real life situations.

Organisational Impact

In addition to the professional development of staff, the organisation should be able to prioritise resources to demonstrate that process risks are adequately controlled

Personal Impact

Attendees will be able to apply skills learnt from this training at a practical level to identify sources of major hazards and to prioritise decisions for their control

SEMINAR OUTLINE

DAY 1

Introduction to Risk Assessment

- Course introduction: delegate and tutor introductions; course objectives
- The concepts of hazards, risk and risk assessment
- Methods for risk evaluation
- Integrating risk assessment within Risk Management
- Qualitative, Semi-Quantitative and Quantitative Risk Assessment methodologies
- Feedback and review of Day 1

DAY 2

Risk Assessment Techniques: HAZOP

- Introduction to hazards identification and analysis techniques
- Techniques for hazard identification and analysis – HAZOP
- Where and when to use HAZOP and the requirements for a successful HAZOP study
- Team composition for HAZOP studies
- Guide words and process variables used for HAZOP studies
- Syndicate exercise - application of HAZOP to relevant processes
- Report back and review of Day 2

DAY 3

Hazop Leadership Techniques

- HAZOP team leader/facilitator requirements
- HAZOP scribe requirements
- Facilitating HAZOP studies, do’s and don’ts
- Information required to allow successful HAZOP studies
- Case study where each delegate has the opportunity to facilitate a HAZOP meeting
- Review of commercial software used for HAZOP and Management of Change

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- Report back and review of Day 3

DAY 4

Consequence Analysis

- Theory behind fire, explosion and toxic dispersion modelling utilised in Quantitative Risk Assessments
- Types of fires and their effects on people and equipment
- Types of explosions and their effects on people and equipment
- Review of software available for consequence calculations
- Report back and review of Day 4

DAY 5

The Role of QRA

- Introduction to Quantified Risk Assessment “QRA”
- The role of Event Tree Analysis in scenario development
- The role of Fault Tree Analysis for multi-causation analysis
- Applications for ETA and FTA
- Failure data for use in QRA’s
- Societal Risk and Individual Risk
- Review of software available for Quantitative Risk Assessments
- Report back on day 5 and discussion
- Programme review and the way ahead

The Scandinavian Academy for Training and Development employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:

- **Theoretical Lectures:**
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- **Scientific Assessment:**
  - We evaluate trainees skills before and after the course to ensure their progress.
- **Brainstorming and Interaction:**
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- **Practical Cases:**
  - We provide practical cases that align with the scientific content and the participants specific needs.
- **Examinations:**
  - Tests are conducted at the end of the program to assess knowledge retention.
- **Educational Materials:**
  - We provide both printed and digital scientific and practical materials to participants.
- **Attendance and Final Result Reports:**
  - We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- **Professionals and Experts:**
  - The programs scientific content is prepared by the best professors and trainers in various fields.
- **Professional Completion Certificate:**
  - Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.
- **Program Timings:**
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.