



# Training Course: Advanced Process HAZOP

9 - 13 June 2024 Amman (Jordan) Chemisty



## Training Course: Advanced Process HAZOP

Training Course code: LS32456 From: 9 - 13 June 2024 Venue: Amman (Jordan) - Chemisty Training Course Fees: 3250 

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#### 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.

#### 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 of Process HAZOP

- 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

#### Who Should Attend?

- HSE Technical Personnel
- Project Engineers
- Maintenance Personnel
- · Process Engineers involved in design and modification
- Instrumentation and Control Engineers

#### Outline of Process HAZOP



#### DAY 1

#### Introduction to Risk Assessment

- Training Seminar Introduction: Delegate and Instructor Introductions; Training Seminar 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 dolls and donlits
- 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 IMOCI
- · 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 QRAIs
- 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



### Registration form on the Training Course: Advanced Process HAZOP

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information
Delegate Information
Full Name (Mr / Ms / Dr / Eng): Position:
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Company Information
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