



# Training Course: Advanced Process HAZOP

3 - 7 June 2024 Madrid (Spain) Pestana CR7 Gran Vía

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## Training Course: Advanced Process HAZOP

Training Course code: LS32456 From: 3 - 7 June 2024 Venue: Madrid (Spain) - Pestana CR7 Gran Vía Training Course Fees: 5250 🛛 Euro

### 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 dols and donlts
- 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 IQRAI
- 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			
Full Name (Mr / Ms / Dr / Eng): Position: Telephone / Mobile: Personal E-Mail: Official E-Mail:			
Company Information			
Company Name: Address: City / Country:			
Person Responsible for Training and Development			
Full Name (Mr / Ms / Dr / Eng): Position: Telephone / Mobile: Personal E-Mail: Official E-Mail:			
Payment Method			
<ul> <li>Please find enclosed a chequ</li> <li>Please invoice me</li> <li>Please invoice my company</li> </ul>	ue made payable to Globa	l Horizon	
Easy Ways To Register			
+201095004484 to	ax your completed registration rm to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.