

# HAZOP

## Leadership and Management

Understanding the Management Fundamentals of Process Safety Analysis in HAZOP Studies

11 - 15 Jul 2022	Dubai	US\$ 4,350
26 - 30 Sep 2022	Dubai	US\$ 4,350
26 - 30 Dec 2022	Dubai	US\$ 4,350
10 - 14 Jul 2023	Dubai	US\$ 4,350
25 - 29 Sep 2023	Dubai	US\$ 4,350



# HAZOP Leadership and Management

Understanding the Management Fundamentals of Process Safety Analysis in HAZOP Studies



## About the Course

HAZOP (Hazard and Operability) study is one of the most widely used hazard identification methods globally and is utilised across many different industries. Numerous potential risks and problems can be identified by using the systematic and structured approach of HAZOP. A successful HAZOP study is only possible if the study is led effectively. Without good leadership, studies' drift' and become, at best, design reviews; or, at worst, contractual arguments. This training course will provide participants with an understanding of the HAZOP methodology and why it works and key skills to take on the role of a HAZOP Team Leader.

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 several Countries' legislators have been focusing on Process Safety to reduce the risks posed by hazardous industries. Process Hazard Analysis (PHA) is recognised as a critical tool in implementing a successful risk management system.

Hazard and Operability (HAZOP) studies are now recognised worldwide as 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 function as HAZOP study Leaders, including preparing and selecting a team, choosing nodes, estimating completion times, avoiding common problems, and formulating reports.

## Core Objectives

**By the end of this training course, the delegates will be able to:**

- 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 shortcomings
- Understand the requirements of a Team Leader or Facilitator, scribe and team members during HAZOP studies
- Facilitate a HAZOP study

## Training Approach

The delegates will learn by participating in exercises, syndicate and group workshops, and looking at case studies and real-life situations. This training course will utilise proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented.

Leadership Mastery combines instruction on the latest developments in leadership studies with real-world case studies, video dramatisations, self-assessments, participatory discussions, and many exercises to make the course an exciting and enriching learning experience.

## The Attendees

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

**This training course will significantly benefit all individuals who wish to improve their skills and develop their knowledge of HAZOP.**

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

# DAILY DISCUSSION

## DAY ONE

### INTRODUCTION TO RISK ASSESSMENT (RA)

- The Concepts of Hazards, Risk and Risk Assessment
- Methods for Risk Evaluation
- Fundamentals of Process Safety Management
- Integrating Risk Assessment within Risk Management
- Qualitative, Semi-Quantitative, and Quantitative Risk Assessment Methodologies

## DAY TWO

### 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

## DAY THREE

### 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
- Commercial Software used for HAZOP and Management of Change 'MOC'

## DAY FOUR

### 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
- Consequence Calculations Software

## DAY FIVE

### THE ROLE OF QUANTIFIED RISK ASSESSMENT (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
- Quantitative Risk Assessments Software