

**Learning Topic: Advanced Process Hazard Analysis (PHA) Methods & Leadership (HAZOP, What-if, FMEA).**

**Course Name: Certified HAZOP Leader**

**Reference Code :SAF 307**

**Description:**

A Process Hazard Analysis (PHA) is an organized effort to identify and analyze the significance of hazardous situations associated with a process or activity. Specifically, PHA studies are used to pinpoint weaknesses in the design and operation of facilities that could lead to accidental chemical releases, fires, or explosions.

This training teaches you the fundamental of PHA and systematic approach to effective use of appropriate techniques in all settings. It covers, HAZOP, What-if, FMEA, and FTA

**Course Objective:**

Learn to organize and lead process hazard analysis studies

Develop the basic requirement for collecting data and information to conduct PHA

Conduct PHA using "What-If" technique.

Conduct PHA using "FTA" technique.

Conduct PHA using "HAZOP" technique.

Conduct PHA using "FMEA" technique.

Conduct PHA using "ETA" technique.

Learn to organize and conduct PHA Revalidation

**Program Methodology:**

The course is conducted in a workshop fashion and is based with large capacity of training aid materials and practical sessions; and customized for SHE team in performing advanced PHA. Sessions include formal presentation, interspersed with directed discussion, workshops and case study. In addition, relevant videos will be shared and commented on.

**United Arab Emirates**

Emirates Towers, Level 41 Sheikh Zayed Road  
Dubai-UAE. P.O Box 3103

Tel.:0097143132317

**Kingdom of Saudi Arabia**

Khobar Gate Tower  
King Fahad Street , Khobar 31952

Tel.: 00966133308334

**Kingdom of Saudi Arabia**

101 Business Tower, 8th Floor  
Al Jubail 35513, Bldg# 9278 ,KSA

Tel.: +966 13 361 5552

## Who Should attend?

This course targets HSE team leaders, supervisors and managers as well as any staff members who may be involved in conducting PHA for the facility.

## Course Outline:

- Overview of PHA
- Hazard Scenarios
- PHA Regulatory Requirements
- Hazard Identification, HAZID
- PHA Methods Overview
  - Checklist
  - What-If
  - Hazard and Operability (HAZOP)
  - Failure Modes and Effects Analysis (FMEA)
  - Fault Tree Analysis (FTA)
  - Event Tree Analysis (ETA)
  - Bow Tie Analysis (BTA)
- Process Hazard Review (PHR)
- Preparing and Organizing PHA Studies
- Subdividing the Process for Study
- Inherent Safety Review
- Completing the PHA Worksheet
  - Team Leader Role and Responsibilities
  - Recording PHA Studies
  - Design Intent, Parameters and Deviations
  - Causes
  - Events
  - Consequences
  - Safeguards
  - Enablers
  - Risk Ranking

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- Recommendations
- Overall Guidelines

- Meeting Regulatory Requirements
- Leadership Skills for Managing the Team
- Management of PHA Studies
- Multiple Failures in PHA
- Human Failures and Human Factors in PHAs
- Facility Siting in PHAs
- Utilities and Support Systems in PHA
- Modes of Operation in PHAs
- PHA of Process Changes
- PHA for Batch Processes
- Quality Control in PHA Studies
- PHA Revalidation Overview
- Preparing for PHA Revalidations
- Conducting and Documenting PHA Revalidations
- PHA Report Preparation

Course Duration	Date	Venue	Course Fee
5 Days			

**Time:** 08:00 AM -03:00 PM

**Numbers of hours:** 30 Hours

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