



# ADVANCE PROCESS HAZOP

**LIVE ONLINE TRAINING**

15th, 16th & 17th March 2022 - ONLINE TRAINING  
TIMINGS: 10:00 AM TO 2:30 PM (GULF STANDARD TIME) – ALL 3 DAYS

# ADVANCE PROCESS HAZOP

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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.

## In this training course, 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

- Understand the concepts of Risk Assessment and Risk Management
- Understand the estimation and evaluation of risks Qualitative, Semi-Quantitative and Quantitated Risk
- Techniques for Hazard identification and Analysis including, HAZOP, FMEA and Check-Lists, Risk Pro 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

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## Syllabus

### 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

### 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

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

### 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

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## 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 3 and Discussion
- Program Review and the Way Ahead

## Trainer profile



### Dr. Hussain H Ahmed

MBE, Bsc, MSc, PhD, PGCE, MSc Eng. Management; MIChemE, MSPE

Dr.Hussain is qualified petroleum engineer who has both the qualifications and the experiences in dealing and managing risk in oil & gas, petroleum projects and contracts. Dr.Ahmed has over 38 years of petroleum engineering experiences and Knowledge both in the field of research, training and lecturing. In the Oil & Gas industry (Upstream & downstream) offshore & on-shore in Europe and the Middle East. BSc in Petroleum Engineering, PhD in Petroleum reservoir Engineering, Heriot-Wati University, Edinburgh.Develop risk templates and risk management procedures for various clients. Coach and mentor personnel in risk management principles and processes using the Bowtie methodology and ISO 31000 standards. “Because of his high standards and best quality services He has been awarded by her majesty the queen by the MBE award”Developed risk management strategies (Risk Manuals) for oil & gas operators to provide guidance on project lifecycle risk assessment, risk profile evaluation and risk reduction. Conduct technical and financial analysis of Liquefied Natural Gas (LNG) storage, distribution and transportation systems. Technical Due Diligence: Calculate CAPEX, OPEX, maintenance, repair and decommissioning costs to ensure accurate valuation of offshore oil & gas assets (e.g. subsea pipelines and platforms). This service is performed for banks during project financing, part payment and repossession of assets. Quantify and analyze business performance improvements and risk reduction following a CAPEX or OPEX decision. One of the objectives of CBA is to evaluate if cost of implementing a solution is grossly disproportionate to level risk reduction achieved. Develop customized risk management solutions to drive the decision making process. One of the objectives of RBDM is to evaluate potential business proposals from risk based perspective. Successfully obtained approval for risk assessment studies for oil & gas facilities from regulatory agencies in Singapore, UK and Norway. Conduct safety studies like HAZID, HAZOP, QRA, Vulnerability Analysis, FERA, SGIA, EERA and TRIA.

**Training Fee: \$ 2000 per Delegate**

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## Sales Contract

Event Code: **HAZ002**

Please complete this form and mail to : [info@quantuzglobal.com](mailto:info@quantuzglobal.com) office:- +919739479900

## Registration Details

Ms:  Mrs:  Mr Surname: .....  Ms:  Mrs:  Mr Surname: .....

Name: ..... Name: .....

Job Title: ..... Job Title: .....

Email: ..... Email : .....

## Organization Details

Country: .....

Organization: ..... Phone: .....

Contact Person: ..... Fax: .....

Email: ..... Address: .....

City: ..... Nature of Business: .....

Country: ..... Website: .....

## Authorization

Booking is invalid without a signature:

Signatory must be authorized on behalf of contracting organization.:

Name: .....

Date: .....

Signature: .....

## Fees

USD **2000** per delegate

20 USD Administration Charges will be applied. Payment is required within 10 working days Payment Method- Bank Transfer

## Terms and Conditions

- Course fee must be paid in full at time of enrolment. Your enrolments are not guaranteed unless full payment is received by us.
  - If we are notified of your enrolment cancellation more than 30 days from the training date, your payment can be 100% refunded to you or applied to another QUANTUZ GLOBAL training and/or instructor of your choice. This credit will expire after 1 year and the funds will be considered forfeited.
  - If we are notified of your cancellation 15 days or less from the start of training course, your payment will be non-refundable.
  - If you voluntarily withdraw from training after the commencement of the class for any reason, your class fee will not be refunded or credited.
  - If, for any reason, you are removed from a class you are participating in by the instructor, you are entitled to a 25% refund. The remaining fee is not refundable.
  - In the event QUANTUZ GLOBAL or the instructor cancels a class for any reason prior to the class, you have the option to apply your registration payment to another QUANTUZ GLOBAL course or a full refund.
  - If the instructor has to suspend a class due to circumstances (i.e. weather, acts of God, etc) outside of the instructor's control, QUANTUZ GLOBAL will make every attempt to reschedule the class expeditiously. Refunds will not be issued under such circumstances.
  - QUANTUZ GLOBAL, reserves the right to change, update, or alter our policies at any time.
- ASSISTANCE : If you need assistance, please feel free to email [info@quantuzglobal.com](mailto:info@quantuzglobal.com)