

## Hazard & Operability HAZOP Study Management Course

### Day 1: Introduction to Process Hazard Analysis and HAZOP

#### Key Topics:

- Introduction to process safety and risk assessment methods
- Overview of Process Hazard Analysis (PHA) techniques
- Fundamentals of the HAZOP methodology
- History, purpose, and scope of HAZOP studies
- Regulatory drivers (OSHA PSM, COMAH, etc.)

### Day 2: HAZOP Methodology and Process Understanding

#### Key Topics:

- Process understanding: P&IDs, PFDs, line lists, and control narratives
- Identifying nodes and defining study boundaries
- HAZOP guidewords and parameters
- Common deviations, causes, consequences, safeguards, and recommendations
- Roles and responsibilities of the HAZOP team

### Day 3: Conducting and Facilitating a HAZOP Study

#### Key Topics:

- HAZOP session workflow and management
- Facilitator's role, techniques, and best practices
- Recording and documentation tools
- Handling team dynamics and technical disagreements
- Use of software (e.g., PHA-Pro, Dyadem, HAZOP Manager)

### Day 4: HAZOP Reporting, Follow-Up and Action Tracking

#### Key Topics:

- Writing clear and actionable HAZOP reports
- Categorizing risk levels using Risk Matrices or LOPA
- Ensuring follow-up and closure of HAZOP actions

Integration with safety management systems (SMS)

Review and update cycles of HAZOP studies

#### Day 5: Advanced Topics, Case Studies, and Final Assessment

Key Topics:

HAZOP in different industries (oil & gas, chemical, pharma, energy)

Managing revalidation studies and dealing with legacy systems

Common pitfalls and how to avoid them

Linking HAZOP with PSM, design, and change management

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