MERCURY

Advanced Process HAZOP Leader Training Course

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Introduction

The advanced process HAZOP leader and PHA course is universally recognized that a proactive approach to risk management is indispensable for any company to thrive. Recently, companies and legislative bodies in numerous countries have emphasized Process Safety as a strategy to mitigate risks posed by hazardous industries. Process Hazard Analysis PHA is critical in realizing a robust risk management framework.

As Hazard and Operability HAZOP studies are now lauded globally as the premier qualitative risk assessment methodology in the process industries, the advanced process HAZOP leader and PHA course will spotlight this facet of PHA.

In this comprehensive HAZOP certification course, participants will explore the methodologies and practices essential to becoming an effective HAZOP leader. The curriculum is structured to bolster your understanding of HAZOP process safety, strategies for risk management, and the detailed functioning of a Process Hazard Analysis PHA. By the culmination of this certified PHA HAZOP leader program, participants will have confidently acquired the acumen to facilitate and lead HAZOP studies within their organizations.

Understanding Advanced Process HAZOP Leader and PHA Course

This advanced process HAZOP leader and PHA course includes HAZOP meaning, HAZOP safety, and PHA, which participants will ensure that they grasp not only the practical applications of these terms but also the theoretical underpinnings that define what HAZOP is.

Additionally, there will be a focus on the skills necessary to earn HAZOP certification and PHA facilitator certification, with the program emphasizing certified HAZOP leader and PHA facilitator training. Participants will leave the course with a deeper comprehension of the complexities of HAZOP facilitator training and the leadership attributes essential for PHA leader training.

Targeted Groups

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

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Course Objectives

Attendees who complete this HAZOP training course will be equipped to:

- Grasp the concepts of risk assessment and risk management.
- Understand the estimation and evaluation of risks using qualitative, semi-quantitative, and quantified techniques.
- Discover hazard identification and analysis techniques, including checklists, risk profiling, HAZOP, FMEA, and task-based risk assessment.
- Delve into analyzing cause-consequences and understand the role of fault and event trees in preventing accidents.
- Comprehend the benefits and limitations of HAZOP studies.
- Recognize the roles and requirements of a team leader, facilitator, scribe, and team members during HAZOP studies.
- Successfully led and facilitated a HAZOP study.

Targeted Competencies

Target competencies who complete this HAZOP training course will be to:

- Apply advanced risk assessment techniques.
- Understand the mechanics of dispersion, fire, explosion, and toxic releases.
- The concept of Quantified Risk Assessment "QRA."
- Hazard and operability HAZOP study methodology.
- HAZOP team leadership skills.

Course Content

Unit 1: Introduction to Risk Assessment

- Understand the concepts of hazards, risk, and risk assessment.
- Methods for risk evaluation.
- Integrate risk assessment within risk management.
- Understand qualitative, semi-quantitative, and quantitative risk assessment methodologies.

Unit 2: Risk Assessment Techniques: HAZOP

- Overview of introduction to hazard identification and analysis techniques.
- Understand techniques for hazard identification and analysis - HAZOP.
- When and where should you use HAZOP, and what are the necessities for a triumphant HAZOP study?
- Team composition and dynamics for HAZOP studies.
- Learn about guide words and process variables capital in HAZOP studies.
- Syndicate exercise - deploying HAZOP on pertinent processes.

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Unit 3: HAZOP Leadership Techniques

- Understand the specifications for a HAZOP team leader/facilitator.
- Essentials for a HAZOP scribe.
- Facilitate HAZOP studies, including the dos and don'ts.
- Overview of information requisites for performing triumphant HAZOP studies.
- Case study allowing participants to experience facilitating a HAZOP session.
- Review commercial software suitable for HAZOP and Management of Change MOC.

Unit 4: Consequence Analysis

- The theory behind the fire, explosion, and toxic dispersion modeling is utilized in quantitative risk assessments.
- Learn about types of fires and their effects on people and equipment.
- Learn about types of explosions and their effects on people and equipment.
- Review of software available for consequence calculations.

Unit 5: The Role of QRA

- Introduction to Quantified Risk Assessment "QRA."
- Learn about the role of Event Tree Analysis ETA in scenario development.
- Learn about the role of Fault Tree Analysis FTA for multi-causation analysis.
- Applications for ETA and FTA.
- Failure data for use in QRA's.
- Understand societal risk and individual risk.
- Review of software available for quantitative risk assessments.