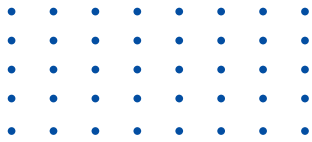


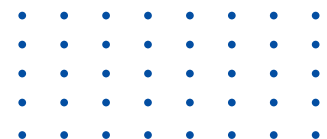
Certified PHA HAZOP

Leader Course Program



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Introduction

Velosi and H2AIM are jointly conducting Certified PHA-HAZOP Leader Training Online.

Velosi is a leading global consulting firm that provides Asset Integrity Management, HSE, Engineering, Environmental and Software Solutions to clients in the Oil & Gas, Energy, Power and Petrochemical industries around the world.

H2AIM is the manufacturing and trading arm of the group dealing with fire protection engineering, fire safety and protection equipment, PPEs, NDT equipment, Manpower supply and trainings.

We provide both standard and customized industrial safety training courses that are specially designed to meet the varied workplace requirements of today's training standards.



**WE HELP YOU
BUILD A STRONG
FOUNDATION TO
BE AN EFFECTIVE
HAZOP LEADER**

Certified PHA HAZOP

Leader Course Program

HAZOP study does not just involve the team meetings themselves. Preparation & completion activities are an essential part of the study. A HAZOP is a group technique for identifying hazards and operability problems. It can be applied to operating process plants and to plants in various stages of design.

HAZOP Team Leader Training teaches process hazard analysis (PHA) techniques and prepares each Participant to lead teams and effectively perform and document HAZOP and other hazard/risk management studies.



Key Topics

- Process Safety Management (PSM)
- Hazard and Operability (HAZOP)
 - Planning
 - Conduction
 - Reporting
- Fault Tree Analysis (FTA)
- Event Tree Analysis (ETA)
- Failure Modes and Effects Analysis (FMEA)



Course Objectives

The course participants will be qualified to serve as a HAZOP leader in conducting HAZOP studies and providing effective support in the PHA phase after achieving the below-mentioned understanding of PHA and HAZOP and passing the related exams at the end of the course.

This course will offer participants a thorough understanding of:

- PSM System Importance
- In-depth knowledge in HAZOP and PHA systems.
- Role of HAZOP and PHA to avoid major accidents in the process industry.
- PHA application to satisfy PSM criteria for initial PHAs and change analysis management.
- Act as a HAZOP leader and provide support towards your company's HAZOP and PHA process.
- Techniques and mechanics that assist in the completion of a study
- Use the HAZOP, FTA, and ETA to practice PHA studies.
- Best practices in leading a HAZOP study and concluding a review.



Who should take PHA HAZOP Leader Training?

Those who are involved in the management, engineering (design, process, chemical, facilities, instrumentation and controls), operations and safety of process operations:

- Process Safety Engineers
- Design Engineers
- Safety/environment personnel
- Plant operators
- Area managers
- Maintenance personnel

Benefits

Those who are involved in the management, engineering (design, process, chemical, facilities, instrumentation and controls), operations and safety of process operations. Engineers, safety/ environment personnel, plant operators,



CAREER
ADVANCEMENT



INCREASED JOB
OPPORTUNITIES



TECHNICAL
EXPERTISE



WORLDWIDE
RECOGNITION

Pre-Requisites

Attendees must have below basic skills in order to participate in this training:

- Experience in Process Operation
- Ability to read and understand engineering drawings
- Basic Computer Skills
- Ability to communicate in English (both oral and written)
- Effective writing skills
- Strong interpersonal and leadership skills

Course Overview

This course covers the explanation and the importance of PSM and PHA. Process Safety at a facility is mainly influenced by:

- Employing appropriate technology in design and construction
- Anticipating the effects of external circumstances
- Understanding and dealing with human behavior;

Process hazard analysis is a cornerstone in process safety management system structure. The effectiveness of all of PSM efforts depends on a successful utilization of the proper PHA methodology thorough PHA comprises of two separate and distinct steps:

- Process Hazard Identification;
- Process Hazard Evaluation; evaluating whether existing or proposed safeguards are adequate to control or mitigate the identified process hazards.

This training course provides you with specific detailed guidelines on how to plan, lead teams and effectively perform, document as well as how to report HAZOP studies.

Participating in practical exercises based on actual real-life examples will discover the tactics and success factors that will help ensure a successful study. Such workshop exercises overseen by the instructor who will give feedback on your performance.

Upon completion of this training course, each participant will receive a certificate of training indicating successful completion of the course effectively and efficiently leading and documenting HAZOP studies.

Training Details

Velosi will ensure that participants gain a thorough understanding of how to be an effective HAZOP Leader and excel in their chosen field.

Trainer Qualification	<p>The tutor has Bachelors Degree in chemistry with advanced training in PHA and process safety management. He brings over 38 years of experience in oil and gas HSE and process safety with over 20 years of experience in training, executing and facilitating PHA studies particularly HAZOP as well as developing, maintaining and auditing PSMS against international standards.</p>
Mode of Training	<ul style="list-style-type: none">• Online Training via Microsoft Team Meet (Live).• Audio/Video• Workbooks
Course Material	<ul style="list-style-type: none">• Training Materials (PDF Copy)• Study notes• Sample Exam Questions and Answers
Number of Participants per Class	<ul style="list-style-type: none">• Minimum of 10 students per batch.• Course Duration is 25 hrs. including examination & clarifications.• The training schedule is flexible and will be either in the mornings on the weekends and evenings on weekdays as per Velosi's approved training schedule.
Admission Policy	<ul style="list-style-type: none">• The interested participants would register his/her name and other necessary details by submitting an online registration form post reading the Admission Policy thoroughly.• An advance payment of 25% should be paid at the time of registration and the balance amount must be settled before the first day of training via online bank transfer.
Certification Issuance Policy	<p>The training certificate (Digital Copy) will be awarded to participants who completed the training and passed the exam with 80% or higher score.</p>
After Training Support	<p>Trainer immediate support and question assistance within 3 months of completed training.</p>

Course Discount Scheme

Group Discount:

- **15%** Discount for groups of 5 or more.
- **10%** Discount for groups of 3-4.

Bundle Discount:

- Sign up for 2 courses: Extra 10% off.
- Sign up for 3 courses: Extra 15% off.

*Only 1 discount of the higher value can be applied at a time.

Examination Process

The examination will be given on the fourth day of the training after the discussion has been concluded.

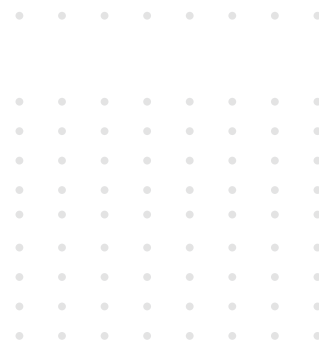
First Section:

- Multiple Choice Questions – 20%
- True or False Questions – 20%
- True or False Questions – 20%

Second Section:

- HAZOP Analysis – 40%
(Analysis report must be submitted on or before midnight (12 am GST) on the same day.)

- * Participant who failed to pass the exam will be given the opportunity once to retake it for free.
- * If the participant failed to pass on the second attempt, they can retake the exam with additional charges.



Other Courses We Offer:

- Safety Certification Exam Courses
 - CFPS
 - CIH
 - ASP/CSP
 - CFSP/CFSE
- Oil & Gas/Energy Industry Training
 - Asset Integrity Management
 - Pipeline Integrity Management
 - Wellhead Integrity Management
 - Structural Integrity Management
 - SIL Selection and Verification
 - Process Design Training
 - API Trainings.
- Maintenance & Reliability Certification Exam Courses
 - CMRP
 - CMRT
- After this Standardized Test Training
 - Quantitative Risk Assessment
 - NEBOSH courses
- Firefighting Training
- H2S & BA Training
- First Aid Courses/Training
- HSE Courses/Training
- IOSH/OSHA Certified Courses
- IADC Certified Courses
- ISO Training
- Security and Safety Training
- Environment Protection Training
- Standardized Test Training
- Administrative and Management Skills Training
- Highfield (HABC) Accredited Trainings
- Data Analytics with Tableau

Why Choose Us

- In-Depth Comprehensive Explanation of all Sections.
- Continuous Assessment with Section-wise Practice Tests
- Study Material in the form of PPT, Group Discussions, etc. written in very easily understandable language.
- Technical clarifications at all levels during/after training.
- Practice Tests at the end of the training.
- Providing Real Exam Questions & Answers
- Provides Course Completion Certificate.



Annexure : PHA HAZOP Course Outline

The PHA HAZOP Leader program covers the explanation/the importance of PSM and PHA. Different “process hazard identification methods (e.g. HAZID)” and “process hazard evaluation” methodologies are presented and discussed thoroughly. As one of the most optimized process hazard evaluation techniques for the process industry HAZOP (Hazard and Operability) the technique is described, discussed, and trained.

Day 1

1. What is process safety?
2. Catastrophic accidents due to PSM failure
3. Process safety management (PSM – OSHA)
4. Hazardous materials
 - Flammable
 - Explosive
 - Toxic
 - Radioactive
 - Corrosive
5. Electrical area classification
6. Management of change
7. PRSSR
8. Incident investigation
9. BowTie Analysis (BTA)
10. PSM audit and physical condition tours

Day 3

13. HAZOP methodology
 - PFD and P&IDs
 - Guidelines for subdividing the process into modes
 - Process node characteristics
 - Node description
 - Process design intent
 - Parameters
 - Guidewords
 - Deviation
 - Identification of causes of deviation
 - Risk Ranking using the approved matrix
 - Consequences
 - Safeguards and recommended actions
 - Case studies
 - Group workshop

Day 2

11. Introduction to HAZOP
 - Definition of HAZOP
 - HAZOP limitations
12. HAZOP planning
 - TOR,
 - When to do HAZOP
 - Time required for the study
 - Team composition, size
 - Roles & responsibilities of HAZOP team and team leader
 - Leadership Skills for Managing the Team
 - PSI required for the study
 - Meeting preparations
 - Case studies
 - Group workshop

Day 4

14. HAZOP results/record keeping
15. HAZOP reporting
16. PEER review
17. HAZOP closure
18. Quality assurance of HAZOP study
19. Fault Tree Analysis (FTA)
20. Event Tree Analysis (ETA)
21. Case studies
22. Group workshop
23. Final exam

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