



Process Safety and Risk Management Best Practices

08/09/2025 To 12/09/2025

Tokyo (Japan)

22/09/2025 To 26/09/2025

Boston, Ma (USA)

13/10/2025 To 17/10/2025

Seoul (South Korea)

27/10/2025 To 31/10/2025

Bali (Indonesia)

10/11/2025 To 14/11/2025

Tokyo (Japan)

24/11/2025 To 28/11/2025

Hong Kong



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Hawalli - Block 11 - Street 172 - Parcel 013521 - Amar Complex - Floor 1 - Flat 1 - PACI Unit No. 18121758

Abar Solutions Petroleum Consultancy Invite Your Employee To Participate With Us In Special Training Course As Under Details:

Course Name		Process Safety and Risk Management Best Practices			
Language	Period	Start	End	Location	Fees
English	5 Days	08/09/2025	12/09/2025	Tokyo (Japan)	1950 KD
		22/09/2025	26/09/2025	Boston, Ma (USA)	
		13/10/2025	17/10/2025	Seoul (South Korea)	
		27/10/2025	31/10/2025	Bali (Indonesia)	
		10/11/2025	14/11/2025	Tokyo (Japan)	
		24/11/2025	28/11/2025	Hong Kong	
** The fees include: lecturer, training material, training room with one coffee break, official certificate of attendance issued on the final day of the course **					

Course Introduction

In today's high-risk petroleum industry, the consequences of process failures can be catastrophic—impacting human lives, the environment, infrastructure, and corporate reputation. The increasing complexity of oil and gas operations, from upstream production to downstream refining and storage, necessitates a disciplined and structured approach to process safety and risk management. This course “Process Safety and Risk Management Best Practices” is designed to equip professionals with the essential knowledge, tools, and global best practices required to proactively manage risks, prevent major incidents, and achieve operational excellence. Drawing from leading standards and guidelines such as OSHA's Process Safety Management (PSM), the Center for Chemical Process Safety (CCPS), and API Recommended Practices, the course explores how to build and sustain a strong safety culture at all organizational levels. Participants will gain practical insights into identifying hazards, assessing and mitigating risks, investigating incidents, and applying performance indicators to monitor and improve safety systems. Through the integration of case studies and interactive workshops, the training emphasizes real-world application and critical thinking to solve complex safety challenges in petroleum operations. Whether you are a safety engineer, operations, or technical, this course will enable you to better understand the lifecycle of process safety and embed risk management into every decision—from the design phase through to daily operations.



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Course Objectives

By the end of this training course, participants will be able to:

- Understand the principles of process safety and its importance in the petroleum industry.
- Identify and assess process hazards using structured methodologies.
- Implement effective risk management strategies to prevent incidents.
- Apply international standards and best practices (API, OSHA, CCPS).
- Develop and monitor safety performance indicators (KPIs).
- Strengthen safety leadership and operational discipline.
- Analyze case studies to extract practical lessons and improve safety culture.

Training Methodology

The course combines interactive lectures, real-life case studies, group discussions, workshops, and hands-on exercises. A highly experienced facilitator will guide the sessions using a mix of visual presentations, risk assessment simulations, and problem-solving scenarios.

Organisational Impact

Implementing the knowledge and skills gained from the Process Safety and Risk Management Best Practices Training Course will have a profound positive impact on your organization, including:

- **Strengthened Safety Culture:** Cultivates a proactive safety mindset across all levels of the organization, encouraging employees to prioritize process safety and risk awareness in daily operations.
- **Reduced Incident Rates:** Enhances the organization's ability to identify, assess, and mitigate hazards effectively, resulting in fewer process safety incidents, near-misses, and accidents.
- **Improved Regulatory Compliance:** Aligns company practices with international safety standards and regulations, reducing the risk of legal penalties and reputational damage.
- **Enhanced Operational Reliability:** Through systematic risk management and hazard control, minimizes unplanned shutdowns, equipment failures, and production losses.
- **Cost Efficiency:** By preventing costly incidents and optimizing maintenance and operational procedures, the organization can achieve significant cost savings.
- **Empowered Workforce:** Equips employees with practical tools and confidence to make informed safety decisions, lead investigations, and contribute to continuous improvement initiatives.
- **Better Stakeholder Confidence:** Demonstrates commitment to best practices in process safety and risk management, enhancing trust among clients, investors, regulators, and the community.



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Course Outline

Day 1: Introduction to Process Safety in Petroleum Operations

- Fundamentals of Process Safety vs. Occupational Safety.
- Key industry incidents and their lessons learned.
- Process Safety Management (PSM) frameworks (OSHA, CCPS, API RP 754).
- Elements of a robust process safety system.
- Safety culture and leadership.

Day 2: Hazard Identification and Risk Assessment (HIRA)

- Hazard types in petroleum processes (flammable, explosive, toxic).
- HAZOP (Hazard and Operability Study) methodology.
- What-If Analysis, FMEA, LOPA.
- Bowtie analysis and fault tree analysis.
- Identifying credible worst-case scenarios.

Day 3: Risk Management and Control Strategies

- Layers of protection and risk reduction hierarchy.
- Process safety barriers: preventive vs. mitigative.
- Safety Integrity Levels (SIL) and Safety Instrumented Systems (SIS).
- Permits to Work (PTW) and operational risk tools.
- Emergency shutdown systems and control of ignition sources.

Day 4: Incident Investigation and Performance Monitoring

- Root Cause Analysis (RCA) and incident investigation techniques.
- Near-miss and accident reporting.
- Leading vs. Lagging indicators.
- Auditing and compliance.
- Continuous improvement in PSM programs.

Day 5: Case Studies, Group Workshop, and Action Planning

- Review of major industry accidents (Texas City, Piper Alpha, Buncefield).
- Lessons learned and practical recommendations.
- Group exercise: Conducting a HAZOP or risk assessment.
- Developing an action plan for process safety enhancement.
- Wrap-up, feedback, and certificate distribution.



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Course Agenda:

Process Safety and Risk Management Best Practices			
Day	9.00 AM To 11.30 PM	30 Minute	12.0 PM To 02.0 PM
MONDAY	Introduction to Process Safety in Petroleum Operations: <ul style="list-style-type: none"> Fundamentals of Process Safety vs. Occupational Safety. Key industry incidents and their lessons learned. 	Light Break	Introduction to Process Safety in Petroleum Operations: <ul style="list-style-type: none"> Process Safety Management (PSM) frameworks (OSHA, CCPS, API RP 754). Elements of a robust process safety system. Safety culture and leadership.
TUESDAY	Hazard Identification and Risk Assessment (HIRA): <ul style="list-style-type: none"> Hazard types in petroleum processes (flammable, explosive, toxic). HAZOP (Hazard and Operability Study) methodology. What-If Analysis, FMEA, LOPA. 		Hazard Identification and Risk Assessment (HIRA): <ul style="list-style-type: none"> Bowtie analysis and fault tree analysis. Identifying credible worst-case scenarios.
WEDNESDAY	Risk Management and Control Strategies <ul style="list-style-type: none"> Layers of protection and risk reduction hierarchy. Process safety barriers: preventive vs. mitigative. 		Risk Management and Control Strategies <ul style="list-style-type: none"> Safety Integrity Levels (SIL) and Safety Instrumented Systems (SIS). Permits to Work (PTW) and operational risk tools. Emergency shutdown systems and control of ignition sources.
THURSDAY	Incident Investigation and Performance Monitoring <ul style="list-style-type: none"> Root Cause Analysis (RCA) and incident investigation techniques. Near-miss and accident reporting. 		Incident Investigation and Performance Monitoring <ul style="list-style-type: none"> Leading vs. Lagging indicators. Auditing and compliance. Continuous improvement in PSM programs.
FRIDAY	Case Studies, Group Workshop, and Action Planning <ul style="list-style-type: none"> Review of major industry accidents (Texas City, Piper Alpha, Buncefield). Lessons learned and practical recommendations. 		Case Studies, Group Workshop, and Action Planning <ul style="list-style-type: none"> Group exercise: Conducting a HAZOP or risk assessment. Developing an action plan for process safety enhancement. Wrap-up, feedback, and certificate distribution.



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