

COURSE OVERVIEW HE1953 Risk Assessment in Oil & Gas Industry

Course Title

Risk Assessment in Oil & Gas Industry

Course Date/Venue

September 29-October 03, 2024/Meeting Plus 2, City Centre Rotana Doha, Doha, Qatar

Course Reference

HE1953

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Description









This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with detailed and up-to-date overview of Risk Assessment in Oil & Gas Industry. It covers the risk management in Gas-to-Liquid (GTL) operations; the importance of risk assessment in production and panel operations; the key concepts of risk and hazard and the types of risks in GTL processes; the regulatory and compliance requirements; the risk identification techniques, the severity and probability of risks assessment; prioritizing risks in production operations; and the risk mitigation strategies, process hazard analysis (PHA) and operational risk management.

Further, the course will also discuss the HAZOP (hazard and operability study) and what-if and failure mode and effect analysis (FMEA) in GTL operations; planning and preparing for process safety incidents; developing and implementing emergency response plans; the human factors and panel operator responsibilities in risk management; aligning risk management with operational excellence goals; the continuous improvement in process safety; and the role of automation in risk mitigation and techniques for reducing process-related risks.





















Carryout preventive maintenance and techniques for identifying equipment failure risks and preventive measures; the role of safety instrumented systems (SIS) in managing high-risk operations and the basics of SIL (safety integrity level) and its application; the risk communication, reporting and behavioral safety and leadership in risk management; the risk monitoring and tracking, risk auditing and frequency; the types of inspections required in high-risk operations; the incident reporting and investigation, maintaining and updating a risk register and accurate documentation in risk management; developing corrective and preventive actions (CAPAs) in response to identified risks; ensuring continuous improvement in risk mitigation efforts; the advanced risk assessment techniques and risk management in project planning and execution; the emerging technologies in risk management; and the sustainability and environmental risk management, business continuity and crisis management.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply ang gain an in-depth knowledge on risk assessment in oil & gas industry
- Discuss risk management in Gas-to-Liquid (GTL) operations and the importance of risk assessment in production and panel operations
- Identify the key concepts of risk and hazard and the types of risks in GTL processes
- Review regulatory and compliance requirements and apply risk identification techniques
- Assess the severity and probability of risks and prioritize risks in production operations
- Employ risk mitigation strategies, process hazard analysis (PHA) and operational risk management
- Apply HAZOP (hazard and operability study) and what-if and failure mode and effect analysis (FMEA) in GTL operations
- Plan and prepare for process safety incidents as well as develop and implement emergency response plans
- Recognize the human factors and panel operator responsibilities in risk management
- Align risk management with operational excellence goals and apply continuous improvement in process safety
- Discuss the role of automation in risk mitigation and techniques for reducing processrelated risks covering isolation, substitution and engineering controls
- Carryout preventive maintenance and techniques for identifying equipment failure risks and preventive measures
- Interpret the role of safety instrumented systems (SIS) in managing high-risk operations and the basics of SIL (safety integrity level) and its application

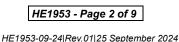
















- Employ risk communication, reporting and behavioral safety and leadership in risk management
- Apply risk monitoring and tracking, risk auditing and frequency and types of inspections required in high-risk operations
- Carryout incident reporting and investigation, maintaining and updating a risk register and accurate documentation in risk management
- Develop corrective and preventive actions (CAPAs) in response to identified risks and ensure continuous improvement in risk mitigation efforts
- Employ advanced risk assessment techniques and risk management in project planning and execution
- Discuss the emerging technologies in risk management as well as apply sustainability and environmental risk management, business continuity and crisis management

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive "Haward Smart Training Kit" (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes electronic version of the course materials conveniently saved in a Tablet PC.

Who Should Attend

This course provides an overview of all significant aspects and considerations of risk assessment in oil and gas industry for production supervisors and panel operators.

Course Fee

US\$ 6,000 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Training Methodology

All our Courses are including Hands-on Practical Sessions using equipment, State-ofthe-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures

20% Practical Workshops & Work Presentations

30% Hands-on Practical Exercises & Case Studies

20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

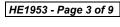


















Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the ANSI/IACET 2018-1 Standard which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET 2018-1 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award 3.0 CEUs (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

British Accreditation Council (BAC) BAC

Haward Technology is accredited by the British Accreditation Council for Independent Further and Higher Education as an International Centre. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.



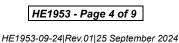
















Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. John Taljard is an International Health, Safety & Environment (HSE) Expert within Oil, Gas and Petrochemical industries. His includes Accident/Incident Investigation Management, Risk Assessment within Production Operation, Hazard Identification, Quantified Risk Assessment, Advanced Process Risk Assessment, Process Hazard Analysis (PHA), Construction Safety

(STOP), Process Safety Management, HAZOP Studies & Leadership, FMEA, Waste Management, Industrial Effluents, Hazardous Material, Chemical Handling, Firefighting, Emergency Response Services, HAZCOM, HAZWOPER and HAZMAT with over **30 years** of practical experience in the **process** industry. His wide experience also includes Environmental Management (ISO 14001), Safety Management (OHSAS 18001), Quality Management (ISO 9001). He is the Founder of ISTEC, an international health & safety management and consultancy company where he is greatly involved in the development and implementation of SHEQ standards & procedures, HAZOP Studies, HAZOP Leadership, FMEA, PHA, operational safety guidelines, inspections & auditing techniques.

While Mr. Taljard has been very active in the process industry for almost three decades, he has likewise headed Consultancy projects for major petrochemical, aviation, engineering & construction, mining & chemical industries. In all his projects, he utilizes a systems approach which includes risk management, process safety, health & environmental management, human behaviour and quality management. Furthermore, he has come to share his expertise through the numerous international trainings he has held on PHA, HAZOP, Risk Assessment, Handling Hazardous Materials & Chemicals, Petroleum Products Handling & Transportation, Fire Fighting & Fire Rescue, Safety Auditing, Hazard Identification & Site Inspection and Accident **Investigation** for several significant clientele among these are **ARAMCO**, **SABIC**, **ZADCO**, **ORPC**, **KOTC**, and **AADC**. Moreover, he completed various assignments as a consultant, trainer, facilitator, auditor & designer and conducted numerous licensed international Safety, Technology and Auditing Awareness & Implementing training courses including IMS, ISO 9001, ISO 14001, ISO 27001, ISO 17799, OHSAS 18001 audits & assessments. With his accomplishments and achievements, he had been a Safety Superintendent, Senior Safety Official and Senior Process Controller for several international petrochemical companies.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

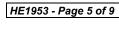


















HE1953-09-24|Rev.01|25 September 2024



Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1:	Sunday, 29 th of September 2024
0730 - 0800	Registration & Coffee
0800 - 0815	Welcome & Introduction
0815 - 0830	PRE-TEST
	Overview of Risk Management in Gas-to-Liquid Operations
0830 - 0930	Introduction to GTL's Risk Management Framework • Importance of Risk
	Assessment in Production & Panel Operations
0930 - 0945	Break
	Key Concepts of Risk & Hazard
0945 - 1030	Understanding Risks, Hazards, & their Differences • Types of Risks in GTL
	Processes: Operational, Safety, Environmental, & Financial
	Regulatory & Compliance Requirements
1030 - 1130	Overview of Qatar's Energy Sector Regulations • Compliance with International
	Safety Standards (ISO, OSHA, etc.)
	Risk Identification Techniques
1130 – 1215	Tools for Identifying Risks in GTL Operations: HAZID, HAZOP, What-If
	Analysis • Case Studies from GTL Plants
1215 – 1230	Break
	Risk Ranking & Prioritization
1230 - 1330	How to Assess the Severity & Probability of Risks • Methods for Prioritizing
	Risks in Production Operations
	Basics of Risk Mitigation Strategies
1330 - 1420	General Approaches for Risk Control & Mitigation • Preventive versus Reactive
	Risk Management
1420 – 1430	Recap
1430	Lunch & End of Day One

Dav 2: Monday, 30th of September 2024

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	Understanding Process Hazards
0730 - 0830	Key Hazards in the GTL Process: Gas Handling, High-Pressure Systems etc •
	Sources of Process Hazards & their Implications
	PHA Tools & Techniques
0830 - 0930	Detailed Exploration of HAZOP (Hazard & Operability Study) • Applying
	What-If & Failure Mode & Effect Analysis (FMEA) in GTL Operations
0930 - 0945	Break
	Emergency Response & Preparedness
0945 - 1100	Planning & Preparing for Process Safety Incidents • Developing &
	Implementing Emergency Response Plans

















	Human Factors in Risk Management
1100 - 1215	Role of Human Error in GTL Operational Risks • Improving Decision-Making
	Processes in High-Risk Environments
1215 - 1230	Break
1230 – 1330	Panel Operator Responsibilities in Risk Management
	Monitoring & Managing Process Parameters to Minimize Risks • Real-Time
	Decision-Making During Critical Operations
1330 – 1420	Operational Excellence in Risk Management
	Aligning Risk Management with Operational Excellence Goals • Continuous
	Improvement in Process Safety
1420 - 1430	Recap
1430	Lunch & End of Day Two

Day 3:	Tuesday, 01 st of October 2024
0730 - 0830	Risk Control Systems
	Overview of Safety Systems in GTL Plants (Alarms, Shutdowns, Interlocks) •
	The Role of Automation in Risk Mitigation
	Risk Reduction Methods
0830 - 0930	Techniques for Reducing Process-Related Risks: Isolation, Substitution, &
0030 - 0930	Engineering Controls • Case Study: Reducing Gas Leakage Risks in Oryx GTL
	Operations
0930 - 0945	Break
	Preventive Maintenance as a Risk Management Tool
0945 - 1100	Importance of Preventive Maintenance in GTL Risk Management • Techniques
	for Identifying Equipment Failure Risks & Preventive Measures
	Safety Instrumented Systems (SIS)
1100 – 1215	Role of SIS in Managing High-Risk Operations • Basics of SIL (Safety Integrity
	Level) & Its Application
1215 – 1230	Break
	Risk Communication & Reporting
1230 – 1330	Best Practices for Communicating Risks to Management & the Workforce •
	Developing an Effective Risk Reporting System
1330 - 1420	Behavioral Safety & Leadership in Risk Management
	Encouraging a Culture of Safety Among Production Supervisors & Panel
	Operators • Role of Leadership in Fostering Risk Awareness
1420 – 1430	Recap
1430	Lunch & End of Day Three

Day 4: Wednesday, 02nd of October 2024

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	Risk Monitoring & Tracking
0730 - 0830	Tools & Techniques for Ongoing Risk Monitoring • Key Performance Indicators
	(KPIs) for Risk Management in Production
	Risk Auditing & Inspections
0830 - 0930	How to Conduct Risk Audits in GTL Facilities • Frequency & Types of
	Inspections Required in High-Risk Operations
0930 - 0945	Break

















0945 - 1100	Incident Reporting & Investigation Best Practices for Reporting Incidents • Techniques for Root Cause Analysis &
	Lessons Learned from Past Incidents
	Risk Registers & Documentation
1100 – 1215	Maintaining & Updating a Risk Register for GTL Processes • Importance of
	Accurate Documentation in Risk Management
1215 – 1230	Break
	Corrective & Preventive Actions (CAPA)
1230 - 1330	Developing CAPAs in Response to Identified Risks • Ensuring Continuous
	Improvement in Risk Mitigation Efforts
	Review of Risk Management Case Studies
1330 - 1420	Case Studies of Successful Risk Mitigation Strategies in the GTL Industry •
	Lessons Learned from High-Profile Incidents in Gas-To-Liquids Operations
1420 - 1430	Recap
1430	Lunch & End of Day Four

Thursday, 03rd of October 2024 Day 5

Day 5:	Inursday, 03° of October 2024
	Advanced Risk Assessment Techniques
0730 - 0830	Exploring Quantitative Risk Assessment (QRA) & Layer of Protection Analysis
	(LOPA) • Utilizing Advanced Risk Assessment Software Tools
	Risk Management in Project Planning & Execution
0830 - 0930	Integrating Risk Management into Project Design & Execution Phases •
	Managing Risks in the Construction & Startup of GTL Facilities
0930 - 0945	Break
	Emerging Technologies in Risk Management
0945 - 1100	Role of AI, Machine Learning, & IoT in Enhancing Risk Management •
	Predictive Maintenance & Risk Forecasting in GTL
	Sustainability & Environmental Risk Management
1100 - 1230	Managing Environmental Risks: Emissions, Spills & Waste Management •
	Regulatory Compliance in Environmental Risk Management
1230 - 1245	Break
	Business Continuity & Crisis Management
1245 - 1345	Developing Business Continuity Plans for GTL Operations • Crisis
	Management & Recovery Strategies for Major Incidents
1345 - 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

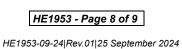




















<u>Practical Sessions</u>
This practical and highly-interactive course includes real-life case studies and exercises:-



<u>Course Coordinator</u> Reem Dergham, Tel: + 974 4423 1327, Email: <u>reem@haward.org</u>













