



External Training Course

Warehouse Intelligence & Inventory Optimization for Oil & Gas Professionals

From 19 May To 23 May 2025

From 28 Jul. To 01 Aug. 2025

From 15 Sep. To 19 Sep. 2025

**Hilton Garden Inn Shanghai Caoyang Hotel
Shanghai, China**

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External Training Course:

Warehouse Intelligence & Inventory Optimization for Oil & Gas Professionals

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Course Introduction

The oil and gas industry operates in a high-risk, capital-intensive environment where downtime, material shortages, or inventory inefficiencies can lead to significant operational and financial consequences. Managing warehouse and inventory functions with intelligence, precision, and strategic foresight is therefore essential.

This 5-day intensive course, "Warehouse Intelligence & Inventory Optimization for Oil & Gas Professionals", is designed to equip petroleum logistics, supply chain, and operations personnel with best-in-class knowledge, techniques, and digital tools to plan, control, and optimize warehouse and inventory systems. The program addresses the entire lifecycle of inventory—from demand forecasting and classification to automated storage and smart monitoring—while aligning materials management with HSSE standards, cost efficiency, and production continuity.

The course integrates real-world scenarios, global oil & gas benchmarks, and interactive learning methods to ensure participants return to their roles with actionable skills and a practical inventory optimization roadmap.

Course Objectives

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

- Understand the strategic value of warehouse and inventory operations in oil & gas projects.
- Design and manage warehouses tailored to petroleum industry requirements.
- Apply digital technologies for real-time inventory tracking and control.
- Forecast inventory needs using modern tools and analysis techniques.
- Reduce inventory costs while improving service levels and availability.
- Implement KPIs and control measures to monitor and improve warehouse efficiency.

Key Takeaways

Participants will gain:

- A complete framework for optimizing petroleum-related inventory and warehouse operations.
- Practical exposure to tools and digital platforms used in modern warehouse environments.
- Methods to cut operational costs, improve inventory accuracy, and enhance supply reliability.
- Confidence to lead inventory improvement initiatives within oil & gas organizations.

Training Methodology

The training is highly interactive, blending:

- Expert-led presentations.
- Case study analysis.
- Real-life petroleum industry scenarios.
- Hands-on exercises and planning workshops.
- Group discussions and team activities.
- Digital inventory planning demonstrations.

Course Content

Day 1: Strategic Inventory & Warehouse Role in Oil & Gas

- Overview of inventory types in oil & gas (spare parts, critical equipment, bulk materials).
- Supply chain dynamics in upstream, midstream, and downstream operations.
- Role of warehouse in reducing downtime and operational risk.
- Inventory control fundamentals: cycle counting, stock accuracy, service levels.
- Introduction to warehouse intelligence systems and Industry 4.0 trends.

Day 2: Warehouse Design, Safety & Automation

- Layout optimization for petroleum sector warehouses.
- Specialized storage for hazardous and high-value materials.
- Regulatory compliance: API standards, OSHA requirements.
- Warehouse automation: RFID, barcode systems, smart shelving.
- Environmental control systems and risk mitigation in oilfield storage.

Day 3: Inventory Planning, Forecasting & Optimization

- ABC/XYZ classification and segmentation.
- Replenishment techniques: EOQ, Min-Max, safety stock calculations.
- Forecasting methods: time-series, regression, demand-driven modeling.
- Shelf-life management and aging analysis.
- Reducing excess and obsolete inventory: root causes and solutions.

Day 4: Performance Management, Risk & Cost Control

- Warehouse and inventory KPIs: inventory turnover, fill rate, accuracy, etc.
- Internal audits and warehouse performance reviews.
- Valuation of inventory and cost control mechanisms.
- Managing inventory risks: shortages, overstock, supply disruptions.
- Digital dashboards and real-time monitoring.

Day 5: Digital Transformation in Inventory & Warehouse Management

- Integration of ERP, WMS, and CMMS (SAP, Oracle, Maximo).
- IoT-based inventory control: sensors, trackers, smart bins.
- Case study: digital warehouse transformation in a petroleum facility.
- Interactive workshop: diagnosing warehouse problems and designing solutions.
- Building an action plan for implementing intelligent warehouse systems.

Learning Outcomes

Upon completing this course, participants will be able to:

- Conduct critical assessments of existing warehouse and inventory practices in oil & gas operations.
- Apply modern inventory planning strategies aligned with business and project cycles.
- Implement smart technologies for warehouse visibility, automation, and decision-making.
- Lead process improvements to reduce inefficiencies, delays, and excess costs.
- Enhance supply chain resilience by anticipating and mitigating inventory-related risks.
- Align inventory and warehouse functions with operational, maintenance, and procurement goals.

Course Agenda:

(1st Day) Agenda

8.30	9.00	Opening Remarks (30 Min.).
9.00	11.30	<u>DISCUSS COURSE OBJECTIVES:</u> <ul style="list-style-type: none"> • Strategic Inventory & Warehouse Role in Oil & Gas. • Warehouse Design, Safety & Automation. • Inventory Planning, Forecasting & Optimization. • Performance Management, Risk & Cost Control. • Digital Transformation in Inventory & Warehouse Management.
11.30	12.00	Coffee Break
12.00	14.00	<u>Strategic Inventory & Warehouse Role in Oil & Gas:</u> <ul style="list-style-type: none"> • Overview of inventory types in oil & gas (spare parts, critical equipment, bulk materials). • Supply chain dynamics in upstream, midstream, and downstream operations. • Role of warehouse in reducing downtime and operational risk. • Inventory control fundamentals: cycle counting, stock accuracy, service levels. • Introduction to warehouse intelligence systems and Industry 4.0 trends.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(2nd Day) Agenda

9.00	11.30	<u>Warehouse Design, Safety & Automation:</u> <ul style="list-style-type: none"> • Layout optimization for petroleum sector warehouses. • Specialized storage for hazardous and high-value materials. • Regulatory compliance: API standards, OSHA requirements.
11.30	12.00	Coffee Break
12.00	14.00	<u>Warehouse Design, Safety & Automation:</u> <ul style="list-style-type: none"> • Warehouse automation: RFID, barcode systems, smart shelving. • Environmental control systems and risk mitigation in oilfield storage.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(3rd Day) Agenda

9.00	11.30	<u>Inventory Planning, Forecasting & Optimization:</u> <ul style="list-style-type: none"> • ABC/XYZ classification and segmentation. • Replenishment techniques: EOQ, Min-Max, safety stock calculations. • Forecasting methods: time-series, regression, demand-driven modeling.
11.30	12.00	Coffee Break
12.00	14.00	<u>Inventory Planning, Forecasting & Optimization:</u> <ul style="list-style-type: none"> • Shelf-life management and aging analysis. • Reducing excess and obsolete inventory: root causes and solutions.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(4th Day) Agenda

9.00	11.30	<u>Performance Management, Risk & Cost Control:</u> <ul style="list-style-type: none"> • Warehouse and inventory KPIs: inventory turnover, fill rate, accuracy, etc. • Internal audits and warehouse performance reviews. • Valuation of inventory and cost control mechanisms.
11.30	12.00	Coffee Break
12.00	14.00	<u>Performance Management, Risk & Cost Control:</u> <ul style="list-style-type: none"> • Managing inventory risks: shortages, overstock, supply disruptions. • Digital dashboards and real-time monitoring.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(5th Day) Agenda

9.00	11.30	<u>Digital Transformation in Inventory & Warehouse Management:</u> <ul style="list-style-type: none"> • Integration of ERP, WMS, and CMMS (SAP, Oracle, Maximo). • IoT-based inventory control: sensors, trackers, smart bins. • Case study: digital warehouse transformation in a petroleum facility.
11.30	12.00	Coffee Break
12.00	14.00	<u>Digital Transformation in Inventory & Warehouse Management:</u> <ul style="list-style-type: none"> • Interactive workshop: diagnosing warehouse problems and designing solutions. • Building an action plan for implementing intelligent warehouse systems.
14.00	14.30	Questions, Discussion & Conclusion Training Course.
14.30		Buffet Lunch