
Quality Management Systems for Oil and Gas Manufacturers Training Course: Risk and Audit Control

16 – 20 August 2027
Paris





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Ref: 582_30259 Date: 16 – 20 August 2027 Location: Paris Fees: 5500 GBP

Programme Summary

Quality management systems for oil and gas manufacturers are the subject of this one-week training course for quality, operations and supplier leaders, ending in a quality system control file for one product line. Manufacturers of pressure-containing and drilling equipment face repeat nonconformances, weak supplier control and audit findings that arrive late. The programme links risk, design, production, supplier and corrective action controls into one working system, applied to a product line the participant manages. Mars Training Centre UK delivers this programme on quality management systems for oil and gas manufacturers to mixed-organisation cohorts.

The Business Case

Quality management systems for oil and gas manufacturers fail when controls exist on paper but not on the shop floor. Where audits are treated as an annual event, nonconforming product reaches customers, supplier defects repeat and records cannot support a dispute. Teams that tie risk, process control and corrective action to each product line find causes earlier and keep evidence ready for customer and third-party audits.

- Repeat Nonconformance Rate: Falls as root causes are closed through verified corrective action.
- Supplier Defect Exposure: Falls as purchasing controls and receiving checks follow supplier risk.
- Audit Finding Backlog: Falls as internal audits test the system against product line evidence.

Principles and Evidence Base

- ISO 9001: Its process approach and risk-based thinking shape the system design in Sessions 1 and 2.
- API Specification Q1: The requirements for quality management systems in petroleum and natural gas product manufacturing frame the control tests in Sessions 2 to 4.
- ISO/TS 29001: The sector specific quality system specification supports the comparison of requirements in Session 1.

Intended Participants

- Quality managers who own the system and its management review.
- Operations managers who run production, inspection and release.
- Supplier quality leaders who approve and monitor external providers.
- Internal audit leads who plan and report system audits.
- Engineering managers who control design change and product requirements.

Typical sectors include drilling equipment, valves and wellhead products, pipe and fittings, and fabrication.



Learning Outcomes

1. Participants will be able to evaluate a quality management system against sector requirements.
2. Participants will be able to prioritise product, process and supplier risks for control.
3. Participants will be able to construct design, production and release controls with records.
4. Participants will be able to diagnose causes of nonconformance and weak corrective action.
5. Participants will be able to plan and challenge an internal audit of a product line.
6. Participants will be able to justify system improvements in a management review.

Programme Structure

Day 1: Quality Management Systems for Oil and Gas Manufacturers

What must a manufacturer of oil and gas products show to run a controlled system?

- Requirement Comparison Matrix
- Process Interaction Map
- Product Line Scope Statement
- Quality Policy and Objectives Sheet
- System Gap Checklist

Day 2: Risk, Design and Product Requirements

How are risks and customer requirements turned into controlled design and planning?

- Risk and Opportunity Register
- Product Requirements Review Form
- Design Input and Verification Record
- Change Control Flow
- Quality Plan Template

Day 3: Production, Inspection and Supplier Control

How is conforming product made, checked and released, and how are suppliers held to the same standard?

- Process Control Plan
- Inspection and Test Record
- Calibration and Traceability Log
- Supplier Evaluation Scorecard
- Release Authorisation Checklist

Day 4: Nonconformance, Corrective Action and Audit

How are failures contained, their causes removed and the system tested?



- Nonconformance Disposition Form
- Root Cause Analysis Sheet
- Corrective Action Effectiveness Check
- Internal Audit Programme
- Management Review Agenda

Day 5: Applying the Tools to One Product Line

Do the earlier controls hold together for one product line under audit?

- Applying the Session 1 System Gap Checklist
- Testing the Session 2 Quality Plan Template
- Using the Session 3 Process Control Plan
- Auditing with the Session 4 Internal Audit Programme
- Completing the Quality System Control File

Methodology

The programme uses a field-style audit method built on anonymised records from equipment makers, fabricators and service sector suppliers. Participants work in audit teams on a shared product line, challenge each other's findings and receive written facilitator feedback on every exercise set.

- Suggested activity: Auditing a sample production record and writing findings with evidence.
- Suggested activity: Scoring three suppliers and agreeing the control applied to each.
- Suggested activity: Drafting a corrective action and testing whether it removes the cause.

Capstone Output

Each participant completes a quality system control file for one product line. It holds a gap assessment, a risk register, a control plan, a supplier control summary and an internal audit plan. The file is used at work to prepare for customer audits, brief the management review and agree actions with production and purchasing colleagues.

Frequently Asked Questions

Are quality management systems for oil and gas manufacturers suitable for managers new to the sector?

Yes. This course on quality management systems for oil and gas manufacturers assumes responsibility for quality, production or purchasing and explains sector terms step by step.



Which standards do quality management systems for oil and gas manufacturers rest on here?

Quality management systems for oil and gas manufacturers rest on ISO 9001, API Specification Q1 and ISO/TS 29001 for the sector requirements.

How is the control file from quality management systems for oil and gas manufacturers used at work?

You use the quality system control file to prepare for customer audits, brief management review and agree actions with production and purchasing colleagues.

How do quality management systems for oil and gas manufacturers differ from general quality auditing?

Quality management systems for oil and gas manufacturers centre on product line controls, supplier control and corrective action for equipment makers, while general quality auditing centres on audit technique across any sector.