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COURSE BROCHURE

# Oil and Gas Pipeline Operations and Maintenance Training Course

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Amsterdam

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Registered in the United Kingdom and Saudi Arabia

# Oil and Gas Pipeline Operations and Maintenance Training Course

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Oil and Gas Pipeline Operations and Maintenance is a 1-week training course for pipeline operators, integrity engineers and maintenance staff, ending with a segment care plan for one real pipeline section. Ageing lines, rising throughput demands and public scrutiny of spills mean every pressure excursion, missed pig run or neglected rectifier now carries real cost. Jupiter Prime Training offers this course in oil and gas pipeline operations and maintenance.

## Why Oil and Gas Pipeline Operations and Maintenance Matters Now

Three pressures shape pipeline work today. Many trunk and gathering lines are running decades past their design start, so wall loss and coating breakdown accumulate quietly. Shippers and processing plants expect steady throughput, which limits shutdown windows for pigging and repair. Communities react sharply to any release. Operators that link hydraulics, pig runs, corrosion protection and repair planning keep lines in service longer; others find defects late. The course draws on industry recommended practice for pipeline integrity and on cathodic protection practice taught by AMPP.

## Who Gains Most from Oil and Gas Pipeline Operations and Maintenance

- Staff who monitor line pressure, flow and alarms from the control room
- Staff who launch and receive pigs and handle pig trap procedures
- Engineers who interpret inline inspection results and plan digs
- Staff who read rectifiers, test posts and close interval surveys
- Crews who carry out sleeves, clamps and hot tap repairs

Control room, field maintenance and integrity groups from one pipeline system gain most when they attend together and agree one shared picture of each segment.

## Oil and Gas Pipeline Operations and Maintenance Capabilities

Participants connect each line reading to a field action.

- Calculate pressure drop and maximum operating pressure margins — for control-room rate decisions
- Specify cleaning and inspection pig runs — for scheduling with shippers
- Assess leak detection alarms from mass balance and pressure waves — for shutdown calls
- Apply cathodic protection readings to spot coating faults — for dig prioritisation
- Weigh sleeve, clamp and cut-out repairs — for maintenance crews and planners
- Build a segment care plan from inspection findings — for integrity engineers

## Key Oil and Gas Pipeline Operations and Maintenance Terms

- Maximum allowable operating pressure — the highest pressure at which a pipeline segment may run, set by design and condition.
- Pigging — sending a device through the line to clean it, separate products or inspect the wall.
- Inline inspection — a smart pig survey using magnetic or ultrasonic sensors to locate metal loss, dents and cracks.
- Computational pipeline monitoring — software that compares measured and modelled flow to raise leak alarms.
- Cathodic protection — an electrical current applied to buried steel so the pipe does not corrode where coating fails.
- Composite sleeve repair — a wrapped reinforcement over a defect that restores strength without cutting the line.

## Oil and Gas Pipeline Operations and Maintenance Day by Day

### Day 1: Pipeline Systems and Flow Behaviour

- Gathering, Trunk and Delivery Line Layouts — Mapping Segments and Owners
- Pressure Drop, Elevation and Pump Station Curves — Setting Line Throughput
- Surge and Pressure Transients From Valve Closure — Protecting Pipe Walls
- Maximum Allowable Operating Pressure Records — Confirming Safe Limits
- Wax, Hydrates and Water Drop-Out — Choosing Flow Assurance Measures

### Day 2: Control Room and Leak Detection

- SCADA Screens, Alarms and Remote Valves — Running Lines From the Control Room
- Mass Balance and Pressure Wave Leak Detection — Judging Alarm Credibility
- Computational Pipeline Monitoring Tuning — Reducing False Leak Alarms
- Line Pack and Batch Tracking — Managing Multi-Product Movements
- Abnormal Operation and Shutdown Procedures — Isolating a Suspected Release

### Day 3: Pigging and Inspection

- Pig Types From Foam to Smart Tools — Matching Pig to Purpose
- Pig Trap Launching and Receiving Procedures — Preventing Trapped Pressure Injuries
- Inline Inspection Reports of Metal Loss and Dents — Ranking Anomalies
- External Survey Methods for Unpiggable Lines — Filling Inspection Gaps
- Dig Verification and Field Measurement — Confirming Tool Findings

### Day 4: Corrosion Protection and Repair

- Cathodic Protection Rectifiers and Test Posts — Reading Protection Levels
- Coating Defect and Interference Surveys — Locating Exposed Steel
- Internal Corrosion Inhibitor and Cleaning Regimes — Slowing Wall Loss
- Sleeves, Clamps and Composite Wraps — Selecting Permanent or Temporary Repairs
- Hot Tapping and Stopple Isolation — Repairing Without Full Shutdown

## Day 5: Practising the Segment Care Plan

- Throughput and Pressure Limit Check for a Sample Line — Applying Day 1
- Leak Alarm Response Scenario — Applying Day 2 Control Room Rules
- Inspection Report Ranking Exercise — Applying Day 3 Pig Data
- Repair Choice for Ranked Defects — Applying Day 4 Methods
- Segment Care Plan Drafting — Pig Runs, Surveys, Repairs and Owners

## Applying Oil and Gas Pipeline Operations and Maintenance After the Course

- Compare the latest inline inspection report with dig records for one segment and update the anomaly list.
- Review leak alarm history with control-room staff and retune one false-alarm threshold.

## Oil and Gas Pipeline Operations and Maintenance Questions FAQ

### What is oil and gas pipeline operations and maintenance and why does it matter now?

It is the daily running, cleaning, inspection, corrosion protection and repair of pipelines carrying crude, products and gas. It matters now because many lines are ageing while throughput and public expectations keep rising.

### Which roles gain most from oil and gas pipeline operations and maintenance?

Control-room operators, pigging and field maintenance crews, cathodic protection technicians and integrity engineers gain most.

### How does oil and gas pipeline operations and maintenance differ from a cathodic protection design course?

This course links hydraulics, leak detection, pigging, inspection and repair across the whole line. A cathodic protection design course goes deep into anode bed sizing and survey techniques alone.

### What do you bring back from oil and gas pipeline operations and maintenance training?

You bring back a draft care plan for one pipeline segment listing pig runs, surveys, ranked defects, chosen repairs and the person responsible for each.

## Oil and Gas Pipeline Operations and Maintenance: The Way Forward

The segment care plan first informs when the next cleaning and inspection pig run should be booked with shippers. Control-room staff use it to understand pressure limits, field crews to plan repairs and integrity engineers to track defects. After its first use, revisit the ranking rules for anomalies, because dig results show whether the inspection tool over- or under-called wall loss.