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COURSE BROCHURE

# Pipeline Internal Corrosion Mitigation Planning Training Course

5 – 9 July 2027
Rome

# Pipeline Internal Corrosion Mitigation Planning Training Course

**Ref:** 2875_109841 **Date:** 5 – 9 July 2027 **Location:** Rome **Fees:** 7200 GBP

Pipeline Internal Corrosion Mitigation Planning is a 1-week training course for corrosion and integrity engineers who must decide how water, acid gases, solids and bacteria inside a line will be controlled, and who record those choices in a corrosion mitigation plan for one pipeline system. Ageing networks, changing production fluids and tighter integrity expectations make internal wall loss a leading cause of unplanned shutdowns. Jupiter Prime Training delivers pipeline internal corrosion mitigation planning.

## Why Pipeline Internal Corrosion Mitigation Planning Matters Now

Fields that once produced dry hydrocarbons now carry rising water cuts, souring reservoirs and injected chemicals, so lines designed for one fluid face another. Operators answer to insurers, landowners and the public for every leak. A system that ties each threat to a barrier and a measurement avoids surprise failures and wasted inhibitor; one that doses by habit discovers pitting only after a release. The course rests on threat-barrier thinking, the Plan-Do-Check-Act PDCA cycle for corrosion control, and Key Performance Indicators KPIs that track barrier availability rather than chemical volumes alone.

## Who Gains Most from Pipeline Internal Corrosion Mitigation Planning

- Engineers who set inhibitor selection, dosing rates and injection points
- Specialists who schedule cleaning pig runs and judge returned debris
- Analysts who interpret coupons, probes and inline inspection
- Integrity engineers who rank lines by internal threat and remaining wall
- Engineers who link external coating and cathodic protection to internal measures

Corrosion groups that share one operating asset gain most when chemists, pigging specialists and integrity engineers attend together.

## Pipeline Internal Corrosion Mitigation Planning Capabilities

The outcomes move from fluid behaviour inside the bore to barriers and limits set line by line.

- Assess water dropout, flow regime and solids deposition along a route — where internal attack concentrates
- Weigh continuous, batch and slug inhibitor treatments — chemical spend and operations crews
- Specify cleaning pig type, frequency and debris sampling — pigging contractors and production planners
- Calculate corrosion rates from coupons, probes and repeat inline inspection — remaining life and inspection intervals
- Align external coating condition and cathodic protection readings with internal findings — integrity ranking of each segment
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Build barrier performance indicators and response triggers — the asset manager and operations leadership

## Key Pipeline Internal Corrosion Mitigation Planning Terms

- Water Dropout — the point where free water separates from flowing hydrocarbon and wets the pipe floor.
- Under-Deposit Corrosion — pitting beneath sand, scale or sludge where inhibitor cannot reach the steel.
- Microbiologically Influenced Corrosion — attack accelerated by bacteria living in stagnant water or deposits.
- Inhibitor Availability — the share of operating time a line receives its intended inhibitor dose.
- Corrosion Coupon — a weighed metal sample removed from the line to measure average wall loss.
- Mitigation Barrier — any measure that stops a named corrosion threat from acting.

## Pipeline Internal Corrosion Mitigation Planning Day by Day

## Day 1: Fluids, Threats and the Pipeline System

- Produced Fluid Composition and Water Cut Trends — Changing Internal Threat Profile
- Carbon Dioxide, Hydrogen Sulphide and Oxygen Ingress — Dominant Attack Mechanisms
- Flow Regime and Elevation Profile Modelling — Locating Water and Solids Accumulation
- Microbial Sampling and Culture Results — Confirming Bacterial Activity
- Threat-Barrier Register for Each Segment — Linking Mechanisms to Controls

## Day 2: Chemical Inhibition

- Filming, Neutralising and Scavenger Chemistries — Matching Product to Mechanism
- Laboratory Wheel and Bubble Cell Testing — Screening Candidate Inhibitors
- Continuous Injection Versus Batch Treatment — Dose Strategy for Each Line
- Biocide Selection and Treatment Frequency — Controlling Bacterial Colonies
- Residual Analysis and Injection Uptime Records — Proving Inhibitor Availability

## Day 3: Cleaning Pigging and the External Interface

- Foam, Brush and Scraper Pig Selection — Removing Deposits Without Sticking
- Pig Run Frequency and Debris Analysis — Adjusting Cleaning Intervals
- Pigging Combined With Batch Inhibition — Treating Freshly Cleaned Steel
- Coating Survey Results and Cathodic Protection Potentials — External Barrier Condition
- Combined Internal and External Wall Loss Records — Single View of Segment Health

## Day 4: Monitoring Results and Response Triggers

- Coupon, Electrical Resistance and Linear Polarisation Probes — Choosing Monitoring Locations
- Repeat Inline Inspection Comparison — Measured Growth Rates of Metal Loss
- Remaining Life Estimates From Growth Rates — Setting Inspection and Repair Dates
- Barrier Indicators and Alert Thresholds — When Operations Must Respond
- Management of Change for Fluid or Throughput Shifts — Revalidating Mitigation Choices

## Day 5: Practising the Corrosion Mitigation Plan

- Segment Threat Ranking Exercise — Applying Day 1 Flow and Fluid Analysis
- Inhibitor and Biocide Treatment Schedule — Applying Day 2 Chemical Selection
- Cleaning Pig Calendar With Coating Follow-Up — Applying Day 3 Interface Checks
- Monitoring Location Map and Indicator Sheet — Applying Day 4 Triggers
- Corrosion Mitigation Plan for a Pipeline System — Final Draft and Peer Challenge

## Applying Pipeline Internal Corrosion Mitigation Planning After the Course

- Rebuild the threat-barrier register for one line using its latest water cut and elevation profile.
- Introduce inhibitor availability and pig run compliance as monthly indicators reported to operations.

## Pipeline Internal Corrosion Mitigation Planning Questions FAQ

### What is pipeline internal corrosion mitigation planning, and why does it matter now?

It is the practice of matching each internal corrosion threat in a line to chemical, mechanical and operational barriers, then measuring them. It matters now because water cuts, souring and ageing steel are raising internal wall loss in many networks.

### Which roles gain most from pipeline internal corrosion mitigation planning?

Corrosion engineers, production chemists and integrity engineers gain most, with pigging specialists and monitoring analysts.

### How does pipeline internal corrosion mitigation planning differ from a cathodic protection course?

Cathodic protection courses design and survey external current systems. This course centres on the bore: fluids, inhibitors, biocides, cleaning pigs and internal monitoring.

## What do you bring back from pipeline internal corrosion mitigation planning?

You bring back a draft plan for one pipeline system, with a threat ranking, a chemical treatment schedule, a pigging calendar, monitoring locations and response triggers.

## Pipeline Internal Corrosion Mitigation Planning: The Way Forward

The corrosion mitigation plan first informs which segments receive continuous inhibition and which rely on batch treatment and cleaning pigs. Corrosion engineers, chemists and operations supervisors use it to schedule work. After the first repeat inspection, revisit whether measured growth rates confirm the chosen barriers or call for a change in dose or pig frequency.