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COURSE BROCHURE

# Pipeline Coating Selection and Disbondment Review Training Course

2 – 6 May 2027
Abu Dhabi

# Pipeline Coating Selection and Disbondment Review Training Course

**Ref:** 2872_109775 **Date:** 2 – 6 May 2027 **Location:** Abu Dhabi **Fees:** 6500 GBP

Pipeline Coating Selection and Disbondment Review is a 1-week training course for coating inspectors and integrity engineers who specify, inspect and investigate external coatings on buried and submerged lines, and who leave with a coating selection and failure review for one of their own pipelines. Coating is the first barrier against external corrosion, and early disbondment shortens line life. Jupiter Prime Training delivers this course on pipeline coating selection and disbondment review.

## Why Pipeline Coating Selection and Disbondment Review Matters Now

Operators are running pipelines hotter, longer and through more aggressive soils than the coatings of earlier decades were chosen for. Owners want fewer excavations and integrity teams must explain every defect found during digs. A line coated with the right system and applied under firm control keeps its protection current low and its anomaly count small. A poorly chosen or badly applied coating disbonds, shields cathodic current and invites corrosion beneath the film. The course rests on recognised coating families, their test methods and failure investigation logic.

## Who Gains Most from Pipeline Coating Selection and Disbondment Review

- Coating inspectors who witness blasting, application and holiday testing at mills and on the right-of-way
- Integrity engineers who interpret dig findings and decide on recoating or repair
- Materials and corrosion specialists who write coating specifications for new lines
- Construction quality staff who accept field joint coatings before lowering-in
- Project engineers who compare coating bids against service temperature and soil conditions

Integrity departments gain most when inspectors and engineers attend together.

## Pipeline Coating Selection and Disbondment Review Capabilities

Participants link coating chemistry to the evidence a failed film leaves behind.

- Weigh fusion-bonded epoxy, three-layer polyolefin and liquid systems against temperature and soil stress — coating selection decisions
- Specify surface cleanliness, profile and salt limits for mill and field work — application contractors
- Assess application records, cure checks and holiday test results — acceptance of coated pipe
- Test adhesion and cathodic disbondment resistance and read the results — qualification of a coating system
- Diagnose disbondment, blistering and shielding from excavation evidence — recoating and repair choices

- Build a coating selection and failure review — integrity managers

## Key Pipeline Coating Selection and Disbondment Review Terms

- Fusion-bonded epoxy — A thermosetting powder sprayed onto heated pipe that cures into a thin, strongly bonded film.
- Three-layer polyolefin — An epoxy primer, copolymer adhesive and thick polyethylene or polypropylene outer layer.
- Field joint coating — Coating applied on site over the bare girth weld zone between factory-coated lengths.
- Cathodic disbondment — Loss of coating adhesion around a defect, driven by alkali formed where protective current reaches bare steel.
- Holiday — A pinhole, void or thin spot in a coating, found with electrical detection equipment.
- Shielding — A condition where disbonded coating blocks protective current from reaching the steel underneath, allowing corrosion beneath the film.

## Pipeline Coating Selection and Disbondment Review Day by Day

### Day 1: Coating Families and Service Demands

- Fusion-Bonded Epoxy Chemistry — Thin-Film Choice for Moderate Temperatures
- Three-Layer Polyethylene and Polypropylene Systems — Mechanical Protection for Rocky Routes
- Liquid Epoxy and Polyurethane Coatings — Rehabilitation and Bends
- Service Temperature and Soil Stress Mapping — Limits on Each Coating Family
- Coating and Cathodic Protection Interaction — Current Demand Over Line Life

### Day 2: Surface Preparation and Mill Application

- Abrasive Blast Cleanliness Grades — Acceptance of Prepared Steel
- Anchor Profile and Soluble Salt Testing — Adhesion Risk Before Coating
- Induction Heating and Powder Application Control — Film Thickness and Cure
- Extrusion and Wrapping of Polyolefin Layers — Bond Between Layers
- Mill Quality Records and Test Rings — Release of Coated Pipe

### Day 3: Field Joints, Handling and Inspection

- Heat-Shrink Sleeves and Liquid Field Joint Systems — Choice for Site Conditions
- Girth Weld Zone Preparation — Overlap and Adhesion on the Line
- Holiday Detection Voltage Setting — Finding Defects Without Damaging Film
- Transport, Stacking and Lowering-In Damage — Repair Before Backfill
- Coating Repair Materials and Patching — Restoring Continuity in the Field

## Day 4: Disbondment Evidence and Failure Investigation

- Cathodic Disbondment Test Results — Comparing Systems Before Purchase
- Adhesion Pull-Off and Knife Tests — Judging Bond at Excavations
- Blistering, Cracking and Soil Stress Wrinkling — Reading Failure Patterns
- Under-Film Corrosion and Shielding Signs — Severity of Hidden Damage
- Root Cause Tracing From Dig Records — Selection, Application or Service Fault

## Day 5: Practising the Coating Selection and Failure Review

- Coating System Comparison Matrix — Applying Day 1 Service Limits
- Application Control Checklist — Applying Day 2 and Day 3 Acceptance Steps
- Excavation Case Evaluation — Applying Day 4 Failure Evidence
- Recoating Versus Sleeve Repair Choice — Cost and Remaining Life
- Coating Selection and Failure Review — Completed for a Participant Pipeline

## Applying Pipeline Coating Selection and Disbondment Review After the Course

- Audit the next field joint coating crew against the surface preparation and holiday detection checklist built in the course.
- Re-examine recent excavation reports and classify each coating defect as a selection, application or service fault.

## Pipeline Coating Selection and Disbondment Review Questions FAQ

### What is pipeline coating selection and disbondment review and why does it matter now?

It is the practice of choosing an external coating for a line's service and then explaining why a coating lost adhesion. It matters now because pipelines run hotter and longer, and disbonded films shield steel from cathodic protection.

### Which roles gain most from pipeline coating selection and disbondment review?

Coating inspectors and integrity engineers gain most. Materials specialists and project engineers comparing coating bids also benefit.

### How does pipeline coating selection and disbondment review differ from a cathodic protection course?

It centres on the coating film itself. A cathodic protection course sizes anodes and runs potential surveys; this one covers coating chemistry, application control and disbondment evidence.

## What do you bring back from pipeline coating selection and disbondment review?

You bring back a coating selection and failure review for one of your own pipelines. It compares candidate systems, sets application checks and traces past defects to cause.

## Pipeline Coating Selection and Disbondment Review: The Way Forward

The coating selection and failure review first informs which system to specify for the next new line or recoating campaign. Integrity engineers use it to set dig priorities, and inspectors use its checks at the mill and on the right-of-way. After the first dig season, revisit whether predicted causes matched what crews found.