JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

Aboveground Storage Tank Inspection and Repair Training Course

12 – 16 April 2027
Singapore

jupiterprime.uk

info@jupiterprime.uk

Registered in the United Kingdom and Saudi Arabia

Aboveground Storage Tank Inspection and Repair Training Course

Ref: 1343_50294 **Date:** 12 – 16 April 2027 **Location:** Singapore **Fees:** 9300 GBP

Aboveground Storage Tank Inspection and Repair is a 1-week training course for inspection and integrity engineers that produces a tank integrity and repair plan for one storage tank in their care. Ageing tank farms, tighter leak expectations and longer intervals between out-of-service inspections raise the cost of a missed bottom or shell defect. Jupiter Prime Training runs this Aboveground Storage Tank Inspection and Repair course.

Why Aboveground Storage Tank Inspection and Repair Matters Now

Three pressures shape tank integrity work today. Many terminals and refineries operate tanks well beyond their original design life, with floor corrosion hidden until a leak appears. Environmental expectations from communities and insurers make product loss to soil far less tolerable. Owners want longer run lengths, so each out-of-service entry must capture enough data to justify the next interval. Teams that assess shells, floors and roofs with sound methods can plan repairs on their own schedule; teams that do not face emergency emptying and cleanup. The course sets this within ISO 55001 asset management and EN 13306 maintenance terminology.

Who Gains Most from Aboveground Storage Tank Inspection and Repair

- Inspectors who plan and record in-service and out-of-service tank examinations
- Integrity engineers who calculate remaining thickness, corrosion rates and next inspection dates
- Maintenance engineers who scope floor, shell and roof repairs during tank outages
- Terminal engineers responsible for settlement surveys and foundation condition
- Project engineers who manage tank alterations, nozzle additions and reconstruction

Tank farm integrity groups gain most when inspectors and repair engineers attend together and agree one assessment routine.

Aboveground Storage Tank Inspection and Repair Capabilities

Participants move from recording tank defects to judging their severity and selecting the right repair before the tank returns to service.

- Plan in-service and out-of-service inspection scopes — the owner's decision on outage timing
- Calculate shell minimum thickness and corrosion rates — fitness for continued operation
- Assess floor plate loss using magnetic flux leakage scan results — floor repair or replacement choices
- Evaluate edge and out-of-plane settlement from survey data — foundation repair decisions
-

Specify patch plates, lap welds and roof seal repairs — maintenance contractors and welding inspectors
- Build a hydrotest and return-to-service checklist — operations and terminal managers

Key Aboveground Storage Tank Inspection and Repair Terms

- Out-of-service inspection — an internal examination with the tank emptied and cleaned, used to measure floor, lower shell and internal coating condition.
- Minimum required thickness — the least shell or floor thickness that still carries product load safely at the current fill height.
- Magnetic flux leakage scanning — a floor screening method that detects underside and topside corrosion pits across steel plates.
- Differential settlement — uneven sinking of the tank around its edge or under the floor that distorts the shell and bottom.
- Lap-welded patch plate — a repair plate welded over thinned or pitted floor or shell areas to restore containment.
- Hydrostatic test — filling a repaired tank with water to confirm strength and leak tightness before product returns.

Aboveground Storage Tank Inspection and Repair Day by Day

Day 1: Tank Types and Damage Mechanisms

- Fixed Roof, Floating Roof and Cone Bottom Designs — Inspection Access Choices
- Internal and External Corrosion Mechanisms — Predicting Where Metal Loss Occurs
- Product Service and Water Bottoms — Choosing Lining and Cathodic Protection
- Tank History Records and Previous Reports — Setting the Inspection Baseline
- Terminal and Water Utility Case Failures — Lessons for Inspection Scope

Day 2: In-Service and Shell Assessment

- External Visual Inspection Routines — Spotting Leaks, Bulges and Coating Breakdown
- Ultrasonic Thickness Grids on Shell Courses — Calculating Corrosion Rates
- Shell Minimum Thickness Calculations — Setting Allowable Fill Height
- Nozzle, Manway and Wind Girder Checks — Local Stress Concerns
- Remaining Life and Next Inspection Interval — Owner Scheduling Decisions

Day 3: Floors, Roofs and Foundations

- Magnetic Flux Leakage Floor Scanning — Mapping Underside Pitting
- Floor Plate Thickness Acceptance — Patch, Overlay or Replace Decisions
- Floating Roof Pontoons, Seals and Drains — Preventing Sinking and Emissions
- Edge and Planar Settlement Surveys — Judging Shell Distortion Risk
- Foundation, Ring Wall and Leak Detection Barriers — Soil Protection Choices

Day 4: Repair, Alteration and Reconstruction

- Patch Plate and Insert Plate Repairs — Weld Detail Selection
- Shell Course Replacement and Nozzle Additions — Alteration Planning
- Jacking, Re-Levelling and Bottom Replacement — Reconstruction Scope Decisions
- Weld Examination and Vacuum Box Testing — Accepting Repair Quality
- Hydrostatic Testing and Return to Service — Release Sign-Off

Day 5: Practising the Tank Integrity and Repair Plan

- Reviewing a Case Tank Inspection Dataset — Applying Shell Assessment Methods
- Floor Scan and Settlement Results — Applying Acceptance Criteria
- Selecting Repairs and Alterations — Applying Reconstruction Options
- Outage Sequence and Contractor Scope — Planning Tank Downtime
- Tank Integrity and Repair Plan — Completing the Owner Recommendation

Applying Aboveground Storage Tank Inspection and Repair After the Course

- Recalculate shell corrosion rates and next inspection dates for one tank using its latest thickness grid.
- Prepare the floor scanning and settlement survey scope for the next planned tank outage.

Aboveground Storage Tank Inspection and Repair Questions FAQ

What is Aboveground Storage Tank Inspection and Repair and why does it matter now?

It is the discipline of examining tank shells, floors, roofs and foundations, judging fitness and planning repairs. It matters now because ageing tanks, stricter leak expectations and longer outage intervals raise the cost of missed defects.

Which roles gain most from Aboveground Storage Tank Inspection and Repair training?

Inspection and integrity engineers gain most. Maintenance, terminal and project engineers also benefit.

How does Aboveground Storage Tank Inspection and Repair differ from a pressure vessel fitness assessment course?

It focuses on atmospheric storage tanks rather than pressurised equipment. You work on floor scanning, settlement, floating roofs and tank reconstruction.

What do you bring back from Aboveground Storage Tank Inspection and Repair training?

You bring back an integrity and repair plan for one tank. It sets inspection findings, fitness results, repair choices and the outage sequence for owner approval.

Aboveground Storage Tank Inspection and Repair: The Way Forward

The tank integrity and repair plan first informs whether a tank can stay in service to its next interval or needs an outage now. Integrity engineers present it to tank owners, while maintenance planners use it to book contractors and materials. After the first outage, compare actual floor findings with predictions to refine corrosion rates and scanning scope.