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COURSE BROCHURE

# Offshore Brownfield Tie-In Engineering Training Course

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Registered in the United Kingdom and Saudi Arabia

# Offshore Brownfield Tie-In Engineering Training Course

**Ref:** 2847_109141 **Date:** 22 – 26 March 2027 **Location:** Rome **Fees:** 7200 GBP

Offshore Brownfield Tie-In Engineering is a 1-week training course for offshore facilities and project engineers who add equipment, pipework and new tiebacks to producing platforms, and it produces a brownfield modification scope. Ageing assets now host more satellite tiebacks, debottlenecking and emissions upgrades, all squeezed into decks with little spare weight, space or shutdown time. Jupiter Prime Training delivers this course on offshore brownfield tie-in engineering.

## Why Offshore Brownfield Tie-In Engineering Matters Now

Three forces drive modification work on existing platforms. Operators extend field life by tying in new wells and subsea satellites rather than building fresh hubs. Electrification and flare reduction projects add skids and cabling to crowded topsides. Bed space, crane capacity and shutdown windows remain tightly rationed. A modification scoped from accurate as-built surveys, checked against weight and structural margins and planned around hot work limits goes in once; one scoped from old drawings brings clashes, re-fabrication and extended shutdowns. The course rests on management of change practice and structured weight control methods.

## Who Gains Most from Offshore Brownfield Tie-In Engineering

- Facilities engineers who define modification scope and tie-in points on producing platforms
- Piping and mechanical engineers who design spools, supports and isolation arrangements
- Structural engineers who check deck capacity, new steelwork and lifting routes
- Project engineers who plan fabrication, offshore construction and shutdown sequencing
- Operations representatives who approve live plant interfaces and handover

A modifications team gains most when engineering, construction and operations members attend together.

## Offshore Brownfield Tie-In Engineering Capabilities

Participants learn to turn a crowded, live deck into a buildable, isolatable and verifiable modification.

- Specify a brownfield survey using laser scanning and walkdowns — accurate as-built data for design
- Calculate weight and centre of gravity changes against platform margins — structural approval of new equipment
- Design tie-in arrangements with isolation, hot tap or cold cut options — the operations team's shutdown decision
- Assess hot work, habitat and permit requirements on live decks — construction method and safety case updates
- Build a shutdown and campaign plan around pre-installation and critical tie-ins — production loss minimisation
- Apply management of change and handover checks — acceptance by operations of the modified plant

## Key Offshore Brownfield Tie-In Engineering Terms

- Brownfield modification — engineering change made to an existing, usually producing, facility rather than to a new build.
- Tie-in — the physical connection of new piping, equipment or a pipeline to an existing live system.
- Hot tap — a method of connecting to a pressurised line by welding a fitting and cutting through without shutdown.
- Weight control report — the record tracking dry and operating weights and centre of gravity against structural allowances.
- Pressurised habitat — a sealed, positively pressured enclosure that lets hot work proceed safely near hydrocarbons.
- Pre-shutdown installation — work completed while the plant runs so that only final connections remain for the shutdown.

## Offshore Brownfield Tie-In Engineering Day by Day

## Day 1: Ageing Assets and Modification Drivers

- Life Extension and Tieback Drivers — Why Hosts Take New Production
- Emissions and Electrification Upgrades — Topsides Impact of New Skids
- As-Built Information Gaps — Drawings, Registers and Their Reliability
- Laser Scanning and Walkdown Surveys — Capturing Reality Before Design
- Modification Concept Screening — Selecting Options That Fit the Host

## Day 2: Weight, Space and Structure

- Weight Control Reports and Margins — Accepting or Rejecting New Equipment
- Deck Space and Layout Studies — Access, Escape Routes and Maintenance Envelopes
- Structural Checks for New Steelwork — Load Paths and Local Reinforcement
- Lifting Routes and Crane Capacity — Getting Modules Onto a Live Deck
- Utility and Power Availability Checks — Spare Capacity for Added Loads

## Day 3: Tie-In Design and Isolation

- Tie-In Point Selection — Process Conditions, Access and Isolation Logic
- Hot Tap Versus Cold Cut Methods — Production Impact and Risk Trade-Offs
- Spool Design From Scan Data — Fit-Up Tolerances and Field Welds
- Positive Isolation Arrangements — Blinds, Double Block and Bleed Choices
- Control and Safety System Integration — Interfacing New Instruments With Existing Logic

## Day 4: Hot Work, Shutdown and Live Plant

- Hot Work Permits and Pressurised Habitats — Working Safely Near Hydrocarbons
- Pre-Shutdown Installation Planning — Shrinking the Critical Shutdown Scope
- Shutdown Sequencing and Bed Space — Fitting Tie-Ins Into Limited Days
- Management of Change Records — Safety Case and Procedure Updates
- Commissioning and Handover to Operations — Proving the Modified System

## Day 5: Practising the Brownfield Modification Scope

- Survey Data Review Exercise — Applying Scan Results to a Case Platform
- Weight and Space Check — Applying Margins to a Proposed Skid
- Tie-In Method Selection — Applying Isolation Logic to a Live Header
- Shutdown Plan Build — Applying Pre-Installation and Sequencing Methods
- Brownfield Modification Scope Completion — Surveys, Tie-Ins, Weight and Shutdown

## Applying Offshore Brownfield Tie-In Engineering After the Course

- Lead a review of the next planned tie-in against the isolation and hot work checklist used during the course.
- Update the platform weight control report with pending modifications and flag any margin shortfall to the structural lead.

## Offshore Brownfield Tie-In Engineering Questions FAQ

### What is offshore brownfield tie-in engineering and why does it matter now?

Offshore brownfield tie-in engineering is the design and execution of changes to producing platforms. It matters now because field life extension, tiebacks and emissions upgrades all rely on adding equipment to crowded, live decks.

### Which roles gain most from offshore brownfield tie-in engineering training?

Facilities, piping, structural and project engineers gain most, along with operations representatives who approve live plant interfaces.

## How does offshore brownfield tie-in engineering differ from a new platform design course?

Offshore brownfield tie-in engineering works inside the limits of an existing live facility. A new platform design course starts from a blank deck, without as-built surveys, hot work constraints or shutdown windows.

## What do you bring back from offshore brownfield tie-in engineering training?

You bring back a brownfield modification scope for a case or real platform. It sets out survey needs, tie-in methods, weight checks and a shutdown plan.

## Offshore Brownfield Tie-In Engineering: The Way Forward

The brownfield modification scope first informs whether a proposed change can be accepted by the host platform and when it can be installed. Facilities, structural and operations engineers use it to agree tie-in methods and shutdown scope. After its first use, revisit the weight margins and pre-installation split against what was actually achieved offshore.