



# case study: Tui Field FPSO Install & Hookup

The “Umuroa”, formerly a bulk oil tanker was partially converted to a floating production storage offloading (FPSO) vessel by Prosafe in Singapore before being delivered to New Zealand. The FPSO, designed to be moored over the Tui Offshore Oil and Gas Field, enabled oil and gas drilled from a number of sub-sea wells to be processed into crude oil and stored onboard. Tenix was awarded the contract to install, hookup and commission the oil and gas production facilities onboard the the FPSO Umuroa.

## Key Features and Outcomes

To complete the conversion of the FPSO to produce oil and gas critical to the sustainability of New Zealand’s supply, Tenix provided multi-disciplined engineering services including fabrication, installation, and commissioning. These included:

- Mechanical pipe fabrication for oil, gas and steam lines (carbon and stainless steel)
- Mechanical equipment, valve and machinery installation
- Structural steel fabrication of walkways, ladders, platforms and supports
- Electrical and instrumentation and safety equipment installation
- Insulation and cladding of pipelines and structures
- Painting, finishing and inspection

Tenix’s dynamic, adaptable and well prepared team overcame the many challenges of working offshore including avoiding inaccuracies in ship-to-shore communication, offshore weather conditions working on an open deck, size constraints for components fabricated in the workshop to be transported to the vessel and limited onboard accommodation.

Tenix received a congratulatory letter from the client upon completion of the project.



## Field Services

- ✓ Project Management
- ✓ Procurement
- ✓ Mechanical Design
- ✓ Mechanical Construction
- ✓ Site Installation
- ✓ Commissioning
- ✓ Maintenance

## Management Services

- ✓ Construction Management
- ✓ Project Management & Systems
- ✓ Quality Management & Systems
- ✓ HR & IR Management
- ✓ Construction Management
- ✓ Procurement Management
- ✓ Subcontractor Management
- ✓ Cost Planning & Estimation
- ✓ Planning and Approvals



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### Our Role

Tenix, the main contractor, worked with the client to complete the conversion of the FPSO Umuroa by providing all labour, plant and equipment both on and offshore. This included:

- all remaining fabrication of the processing facilities
- supply and off-site fabrication of plant and pipe work required to complete the process systems
- commissioning of various systems once oil & gas was available to the “Umuroa”
- any modifications required by the client post-commission
- improvements to the onboard marine operations.

All design and construction met with the ASME VIII or ASME XI codes in addition to the Lloyds Register of Shipping requirements.

### Resources & Skills

Tenix’s team included a project manager, project engineers, supervisors and up to 60 tradesmen during the conversion stage of the project. The tradesmen included fitters, welders, scaffolders, riggers, joiners, carpenters, instrumentation technicians and electricians, insulators, painters and plumbers. All staff were trained in BOSIET Helicopter Evacuation procedures prior boarding the FPSO Umuroa. The project took 160,000 manhours including workshop and post-commissioning work.

**Asset Type:**

Oil &amp; Gas Production

**Duration:**

10 months

**Client:**

Prosafe (Singapore)

**Value:**

\$13 million

**Location:**

80km off Taranaki Coast, NZ

**Scope:**

Construct &amp; Install

**Contracting Style:**

Charge-up &amp; Lump Sum

**Contract Secured:**

May 2007

