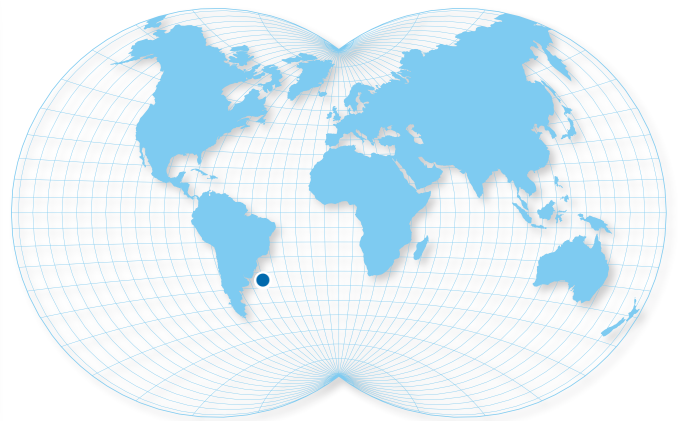


CAMPOS BASIN, BRAZIL:

FSO UOTE External Turret



Scope of Work

SOFEC designed, constructed, fabricated and delivered an external mooring system for the FSO UOTE. The FSO is part of the Petrobras Offshore Crude Terminal located in the Campos Basin, Offshore Brazil. The offshore crude terminal consists of two CALM buoys and a turret moored FSO unit with tandem mooring for shuttle tankers. The FSO UOTE is located in 75 meters water depth and is designed to withstand the extreme environmental conditions with return periods up to 100 years, with a passive, weathervaning external turret mooring system.

The SOFEC external mooring system is ABS classed.

General Description

Client Name:	Tanker Pacific Offshore Terminals, Pte. Ltd.
Contract Award:	January 2012
Installation Date:	August 2013
First Oil:	September 2013
Vessel Size:	391,800 dwt
Storage Capacity:	339,200 bbls

Water Depth:	75m (246ft)
Fabrication: Turret -	China
Vessel -	China

Design Environmental Criteria (100-year storm)

Sig. Wave Height:	7.84m (25.7ft)
Wind Velocity:	31m/s (60.2 kts)
Current:	1.4m/s (2.72 kts)

Mooring System

4 x 3 mooring system consisting of chain and drag anchors

Fluid Swivel Assembly

3x 20-in. Toroid Swivels, 150# SOFEC designed and supplied swivel stack, with electrical and Fiber optic slip rings

Riser System

2 x 20-in offloading submarine hoses with one control umbilical