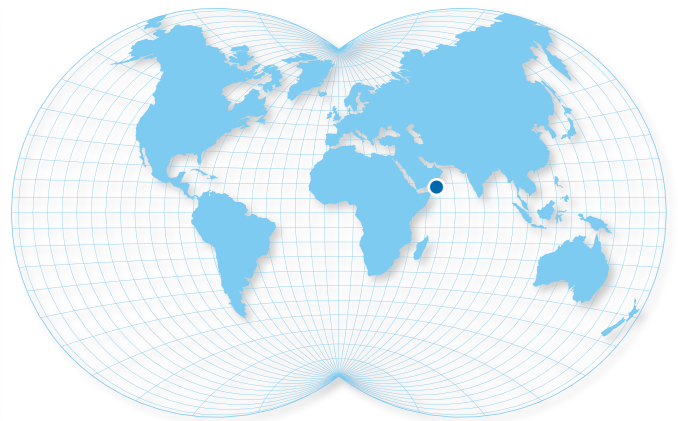


SALEEF FIELD, YEMEN:

FSO Safer External Turret



Scope of Work

SOFEC developed, designed and constructed an external turret-type SPM system for a 409,000 dwt tanker that serves as an FSO terminal for crude oil. Installed in March 1988, it is the largest FSO system in the world and is still currently operating.

This SOFEC external turret mooring system is ABS classed.

General Description

Client Name:	Yemen Hunt Oil Company
Contract Award:	August 1986
Installation Date:	March 1988
Vessel Size:	409,000 dwt
Storage Capacity:	3,100,000 bbls
Water Depth:	38m (122ft)
Fabrication:	Turret - Japan Vessel Conversion - Japan

Design Environmental Criteria (100-year storm)

Significant Wave Height:	6.3m (21ft)
Wind Velocity:	30.4m/s (59 knots)
Current:	0.7m/s (1.4 knots)

Mooring System

- 6-leg Symmetric catenary:
- 6-in. ORQ chain
- 48-in.Ø piles

Turret

External Cantilevered Bow

Fluid Swivel Assembly

Crude Oil:	2 x 12-in. non-piggable paths (225 psi operating/350 psi test)
Hydraulic Control Swivel:	6 x 0.5-in. paths (3,000 psi operating/4,500 psi test)

Riser System

- 2 x 12-in. OCIMF submarine hoses
- 1 x Hydraulic umbilical