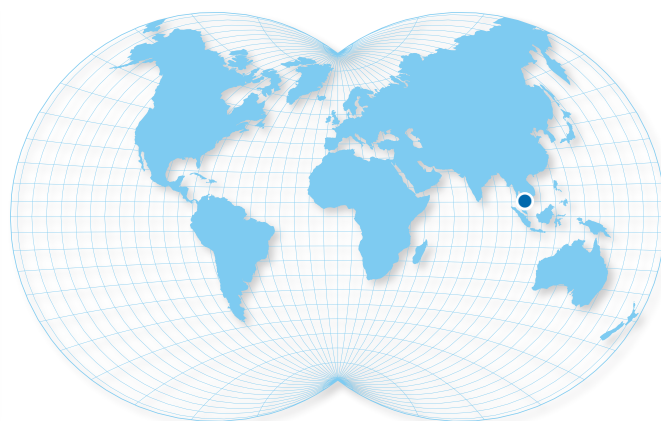


BONGKOT FIELD, GULF OF THAILAND:

FSO Pathumabaha External Turret



Scope of Work

SOFEC designed and constructed an external turret mooring system for a MODEC purpose-built 60,000 dwt FSO in 78m water depth in the Bongkot Gas Field, Gulf of Thailand. Two 6-in. submarine hose risers, one duty and one spare, and one umbilical are connected from the external turret of the FSO to the PLEM located on the seafloor.

The SOFEC external turret mooring system is ABS classed.

General Description

Client Name:	Consortium of Total, British Gas and PTT Exploration & Production (PTTEP)
Contract Award:	August 2001
Installation Date:	January 2003
First Oil:	January 2003
Vessel Size:	60,000 dwt
Storage Capacity:	400,000 bbls
Water Depth:	78m (256ft)
Fabrication:	Turret - China Vessel - China Topsides - China

Design Environmental Criteria (100-year storm)

Significant Wave Height:	7.9m (26ft)
Wind Velocity:	37m/s (72 knots)
Current:	1.3m/s (2.53 knots)

Mooring System

8-leg Symmetrical mooring:
 3.5-in. mooring chain (110m) Top chain
 3.5-in with 4-in. insertions (80m) Excursion limiter
 142mm (109m) Drape chain
 3.5-in. (400m) Ground chain
 Pile

Turret

External Cantilevered Bow

Fluid Swivel Assembly

Production:	2 x 8-in. toroid (740 psi design)
Hydraulic Swivel:	6 path (3,000 psi design)

Riser System

2 x 6-in. Flexible riser