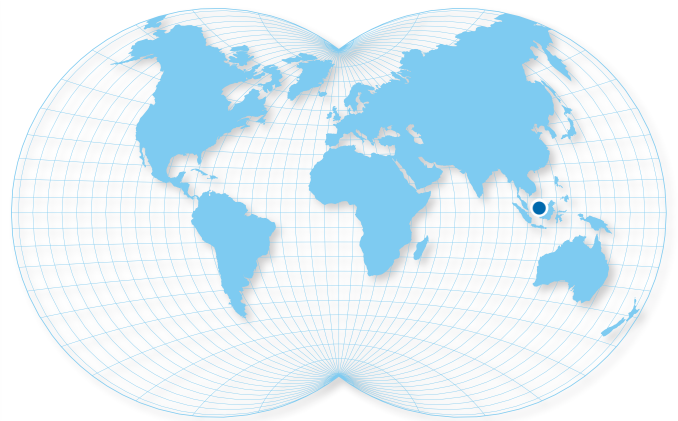


NORTH MALAY BASIN, MALAYSIA:

FSO North Malay External Turret



Scope of Work

SOFEC designed, constructed, fabricated and installed an External Turret and Turret Support Structure for the Hess North Malay Basin FSO. The North Malay Basin (NMB) is located offshore Peninsular Malaysia immediately south of the Malaysia-Thailand Joint Development Areas (MTJDA), approximately 150 km North East from Kota Bharu, in 55 to 60m water depth. The FSO vessel has a double-bottom and double-sides, and a minimum storage capacity of 550,000 bbls. Stabilized condensate is transferred from the CPP to the FSO via a 6.625-in. pipeline and exported to tandem-moored shuttle tankers via the stern of the FSO vessel.

The SOFEC external turret mooring system was delivered in under 13 months and is Bureau Veritas classed.

General Description

Client Name:	Hess
FPSO Contractor:	E.A. Technique
Contract Award:	March 2015
Installation Date:	Planned for 2018
First Oil:	Planned for 2019

Vessel Size:	107,000 dwt
Storage Capacity:	550,000 bbls
Water Depth:	56m (184ft)
Fabrication:	Turret - MMHE Topsides - MMHE Vessel - MMHE

Design Environmental Criteria (100-year storm)

Sig. Wave Height:	6.7m (22.0ft)
Wind Velocity:	1.1m/s (2.1 kts)
Current:	22.9m/s (44.5 kts)

Mooring System

- 9-leg 3x3 all chain mooring
- 130mm R3 chaing
- Driven anchor piles

Fluid Swivel Assembly

From top to bottom, the Swivel Stack Assembly consists of the following components:

- In-Line Piggable Condensate Swivel (6-in Class 150)
- Low Voltage Electrical Slip Ring (LVESR)
- Toroidal Condensate or Gas Swivel (6-in Class 150)



FSO North Malay

(Continued) **Riser System**

1 x 6-in. Flexible Riser (Condensate Import)

1 x 6-in. Flexible Riser (Future Service)

Comments

The turret system has also been designed to survive a 10,000-year survival event.