

EXTERNAL COLUMN TURRET DATA

FIRENZE FPSO EXTERNAL COLUMN TURRET

CLIENT	ENI SpA / Saipem SpA
LOCATION	50 km NE Brindisi, Italy, Adriatic Sea
VESSEL	Conversion; (238 m (L) x 42 m (B) x 22 m (D))
FABRICATION	2009 - 2011; Dubai Dry Docks, UAE
CLASS SOCIETY	RINA
DESIGN LIFE	15 years
WATER DEPTH	880 m
SIG WAVE HEIGHT	8.8 m
MOORING SYSTEM	4 x 2 cluster, chain - wire - chain system
ANCHORING SYSTEM	Existing Piles
RISER SYSTEM	Steep Wave with Tether; 3 x 2.5" Gas Lift, 3 x 6" Production, 3 x Umbilical



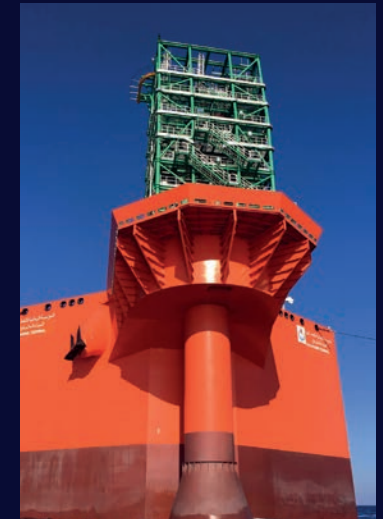
FSRU TOSCANA EXTERNAL COLUMN TURRET

CLIENT	Offshore LNG Toscana (OLT) / Saipem SpA
LOCATION	12 miles offshore Livorno, Italy
VESSEL	Converted LNG Carrier (Moss Type); (310 m (L) x 48 m (B) x 26.5 m (D))
FABRICATION	2009 - 2011; Dubai Dry Docks, UAE; Integration: Dubai Dry Docks, UAE
CLASS SOCIETY	RINA
DESIGN LIFE	20 years
WATER DEPTH	112 m
SIG WAVE HEIGHT	8.2 m
MOORING SYSTEM	6 x 1 cluster, all chain mooring system
ANCHORING SYSTEM	Drag Anchors
RISER SYSTEM	Lazy-S with Mid Water Arch; 2 x 14" Gas Export Risers, 1 Umbilical



GAZA FSO (SLOUG REPLACEMENT) EXTERNAL COLUMN TURRET AND SWIVEL STACK

CLIENT	Mellitah Oil and Gas B.V / STX Offshore and Shipbuilding / EMAS Chiyoda Subsea (EMAS AMC) Odebrecht Oil & Gas - Teekay (OOGTK)
LOCATION	120 km North West of Tripoli, Libya
VESSEL	New Build; (316 m (L) x 51 m (B) x 30 m (D))
FABRICATION	2013-2016; Keppel, Singapore; Integration: STX Offshore & Shipbuilding, Korea
CLASS SOCIETY	Det Norske Veritas (DnV)
DESIGN LIFE	35 years
WATER DEPTH	165 m
SIG WAVE HEIGHT	8.8 m
MOORING SYSTEM	3 x 3 cluster, all chain mooring system
ANCHORING SYSTEM	Driven Piles
RISER SYSTEM	Lazy-S with Mid Water Arch; 2 x 14.75" Production Risers, 1 x 10" Import Riser, 1 x Power / Optical
SWIVEL SYSTEM	3 x 8" Production / 1 x High Voltage Slip Ring (HVSR) / 1 x Low Voltage Slip Ring (LVSR) / 1 x Utility Swivel / 1 x Fibre Optic Rotary Joint (FORJ)



CPTL 137 B (FARWAH) FPSO EXTERNAL COLUMN TURRET (EPC)

CLIENT	Compagnie des Petroles Total (Libye) (CPTL) / Exmar Offshore / Doris Engineering
LOCATION	Offshore Libya
VESSEL	New Build; (210 m (L), 44 m (B), 23 m (D))
FABRICATION	2002 - 2003; Burntisland Fabrications (BIFAB), Scotland; Integration: IZAR FENE, Spain
CLASS SOCIETY	Bureau Veritas (BV)
DESIGN LIFE	20 years
WATER DEPTH	83 m
SIG WAVE HEIGHT	8.8 m
MOORING SYSTEM	3 x 3 cluster, all chain mooring system
ANCHORING SYSTEM	Stevpris Drag Anchors
RISER SYSTEM	1 x 10" Production Riser

