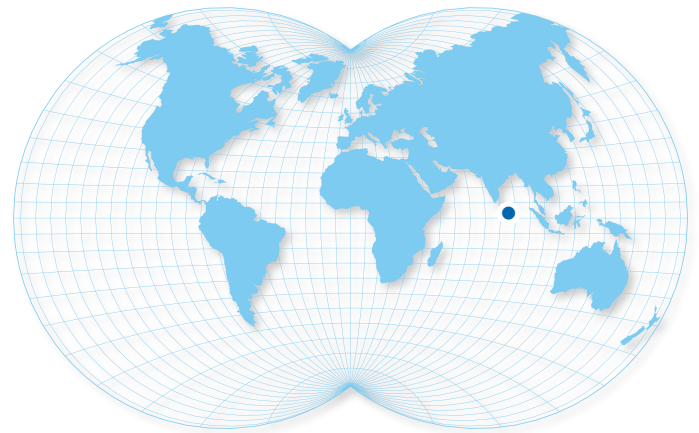


NAGARJUNA, INDIA: Nagarjuna CALM



Scope of Work

SOFEC designed, constructed, and supplied one (1) Catenary Anchor Leg Mooring (CALM) system for Nagarjuna Oil Corporation Limited (NOCL) to be installed in the southeast coastal waters of India, 24km south of the town of Cuddalore, in Tamil Nadu state.

The CALM Buoy system includes the complete buoy assembly, PLEM, anchoring system and telemetry package.

The SPM is designed in accordance with DNV standard DNV-05-E403, "Offshore Loading Buoys", 2008 and carries the "DNV Offshore Loading Buoy classification

General Description

Client Name:	Nagarjuna Oil Corporation Limited (NOCL)
Contract Award:	June 2010
Installation Date:	2012
Application:	Import Crude Oil

Project Specifications

Water Depth:	31m (102ft)
Tanker Size:	300,000 dwt
Dimension:	11mØ x 5.8m
Floating Hose:	2 x 24-in.
Underbuoy Hose:	2 x 24-in.
Hawser System:	19-in. Single leg non-grommet
Anchor Leg System:	3.75-in. studless garde R3 chain
Anchor System:	Drag embedment

Design Environmental Criteria

Operational	
Significant Wave Height:	2.5m (8.2ft)
Wind Velocity:	22m/s (42.8 knots)
Surface Current:	1.0m/s (1.9 knots)
Survival	
Significant Wave Height:	15.3m (50ft)
Wind Velocity:	55.6m/s (108 knots)
Surface Current:	1.0m/s (1.9 knots)