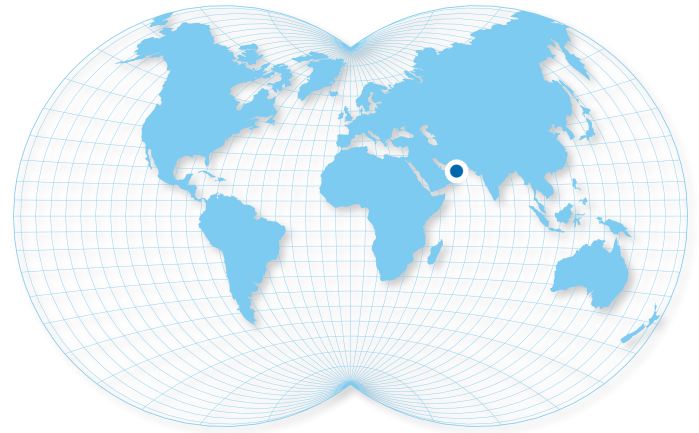


JEBEL DHANNA, UNITED ARAB EMIRATES: Jebel Dhanna #2 CALM



Scope of Work

SOFEC designed, constructed, and installed a CALM Buoy system to accommodate up to 450,000 dwt tankers.

General Description

Client Name:	Abu Dhabi Company for Onshore Oil Operations (ADCO)
Contract Award:	October 1998
Installation Date:	July 1999
Application:	Crude Oil Export

Project Specifications

Water Depth	23m (60ft)
Tanker Size	450,000 dwt
Dimension	11mØ x 4.5m
Floating Hose:	2 x 20-in.
Underbuoy Hose:	2 x 20-in. Chinese Lantern
Hawser System:	14-in. Single grommet
Anchor Leg System:	6 x 3-in. ORQ
Anchor System:	13mt Drag anchors

Design Environmental Criteria

Operational	
Significant Wave Height:	1.3m (4.3ft)
Wind Velocity:	28.8m/s (56 knots)
Current:	1 m/s (1.95 knots)

Survival	
Significant Wave Height:	2.2m (7.2ft)
Wind Velocity:	42.7m/s (83 knots)
Current:	1 m/s (1.95 knots)

Comments

This SOFEC export CALM system was installed in 23m water depth. This includes extension of the existing 36-in. sealines and removal of two existing CBM. This is the fourth project in which SOFEC has been involved in the replacement of a CBM system with a more efficient SPM system and the second for ADCO.