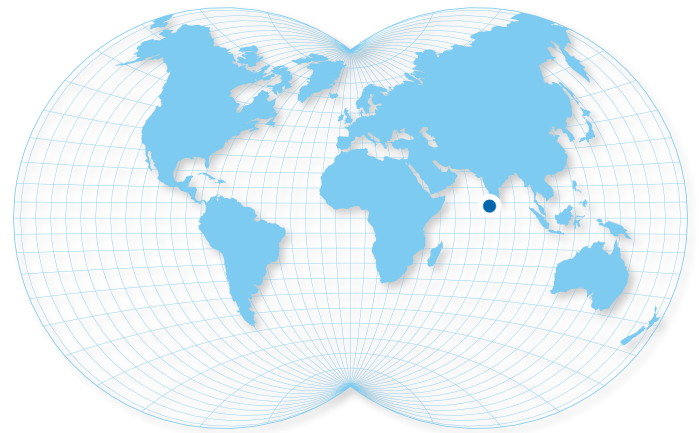


RAVVA FIELD, INDIA: RAVVA CALM



Scope of Work

SOFEC supplied a 12.5m diameter CALM buoy from its stock buoy program to replace a non-SOFEC® buoy that had experienced premature failure in service.

General Description

Client Name:	Cairn Energy India Pty. Ltd.
Contract Award:	October 1998
Installation Date:	November 1998
Application:	Crude Oil Export

Project Specifications

Water Depth:	25m (82ft)
Tanker Size:	120,000 dwt
Dimension:	12.5mØ x 5.3m
Floating Hose:	1 x 20-in.
Underbuoy Hose:	1 20-in. Steep S
Hawser System:	13-in. Single grommet
Anchor Leg System:	6 x 3-in. Stud link
Anchor System:	Unavailable

Design Environmental Criteria

Operational	
Significant Wave Height:	3.5m (11.5ft)
Wind Velocity:	15m/s (29 knots)
Surface Current:	1.3m/s (2 knots)

Survival	
Significant Wave Height:	9.5m (31ft)
Wind Velocity:	36m/s (70 knots)
Surface Current:	2.3m/s (4.5 knots)

Comments

When Cairn Energy India experienced a catastrophic failure of a competitor's buoy, SOFEC was awarded the task of replacing the buoy. Located in 25m water depth, the CALM buoy accommodates 120,000 dwt tankers. SOFEC's buoy serves to export oil production from Cairn Energy's RAVVA Field off the East Coast of India.

Using specially engineered excursion limiters, SOFEC successfully fitted its CALM system to the existing six-leg anchor chains.