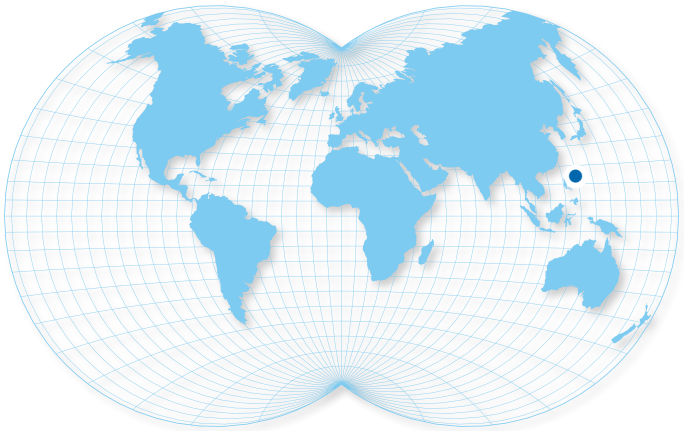
KAOHSIUNG, TAIWAN:

CPC Ta Lin Pu #4 CALM



Scope of Work

SOFEC designed and constructed the complete CALM terminal with a dual product swivel for the Talinpu Refinery at Kaohsiung, Taiwan. The contract included the PLEM for two 34-in. subsea pipelines. The 12.5m diameter CALM is anchored to the seafloor by six 3.5-in. chain legs and 12mt "Stevpris" high capacity drag anchors. The system is equipped with dual 20-in. hoses for diesel, gasoil and naphtha.

General Description

Client Name:	Chinese Petroleum Corp. (CPC)
Contract Award:	June 1991
Installation Date:	May 1992
Application:	Diesel, Gasoil and Naphtha Import

Project Specifications

Water Depth:	26m (85ft)
Tanker Size:	100,000 dwt
Dimension:	12.5mØ x 4.8m
Floating Hose:	2 x 20-in.
Underbuoy Hose:	2 x 20-in. Chinese Lantern
Hawser System:	16-in. Dual grommet
Anchor Leg System:	6 x 3.5-in. Grade U3
Anchor System:	12mt Stevpris anchors

Design Environmental Criteria

Operational

Significant Wave Height:	4.6m (15ft)
Wind Velocity:	28.3m/s (55 knots)
Surface Current:	0.9m/s (1.8 knots)

Survival

Significant Wave Height:	9m (29.5ft)
Wind Velocity:	74.6m/s (145 knots)
Surface Current:	2.1m/s (4 knots)

Comments

This CALM was the second buoy designed and built by SOFEC for the Chinese Petroleum Corporation (CPC). The CALM system is designed to moor 100,000 dwt tankers. It has a dual product swivel used to import naphtha, diesel, and gasoil. The underbuoy hoses are arranged in a Chinese Lantern configuration. Both systems are designed to survive extreme typhoon conditions.