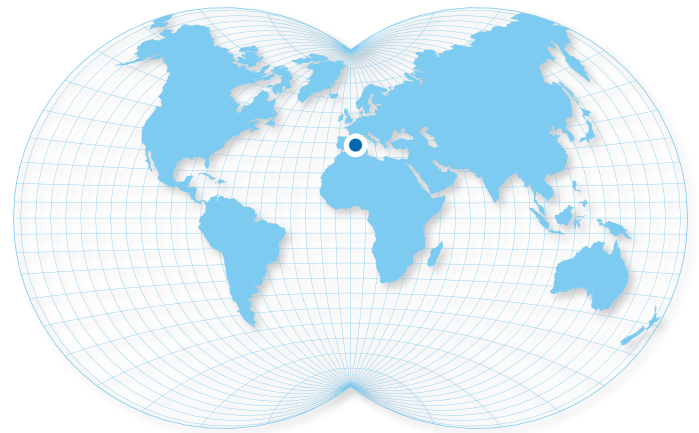


ARZEW, ALGERIA:

Sonatrach Arzew #1 & #2 CALMs



Scope of Work

In December of 2002 SOFEC was awarded design, supply and installation of five offshore loading stations for transportation of crude oil and condensate from onshore facilities for Sonatrach TRC, the Oil and Gas Company, in Algeria. The project provides for the installation of five SOFEC CALM export buoys and associated PLEMs, onshore and offshore pipeline and onshore facilities including metering and pumping stations.

General Description

Client Name:	Sonatrach TRC
Contract Award:	December 2002
Installation Date:	2005
Application:	Export

Project Specifications

Water Depth:	Arzew #1	62m [203ft]
	Arzew #2	52m [171ft]
Tanker Size:	320,000 dwt	
Dimension:	12.5mØ x 5.3m	
Floating Hose:	2 x 24-in.Ø to 16-in.Ø	

Underbuoy Hose:	2 x 24-in.Ø Lazy Wave
Mooring Hawser:	15-in. Dual 360T M.W.B.S.
Anchor Leg System:	6 x 3-in. Grade R3 Studless
Anchor System:	6 x 10mt Stevshark drag anchors

Design Environmental Criteria

Operational	
Significant Wave Height:	2.5m [8.2ft]
Wind Velocity:	14.84m/s [28.9 knots]
Surface Current:	0.58m/s [1.1 knots]
100-year	
Significant Wave Height:	7.9m [26ft]
Wind Velocity:	25m/s [48.6 knots]
Surface Current:	0.74m/s [1.4 knots]