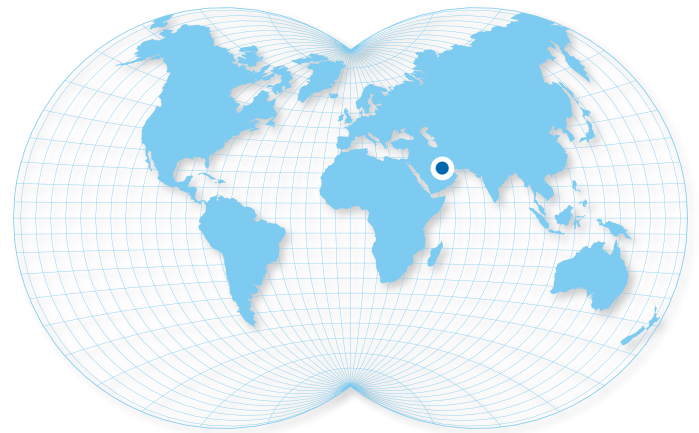


JU'AYMAH, SAUDI ARABIA:

# Ju'aymah #34 & #35 SALMs®



## Scope of Work

SOFEC designed, constructed, and supervised installation of two SPMs for 750,000 dwt tanker (ULCC's).

Designed and fabricated by SOFEC for ARAMCO in 1975, the Ju'aymah #34 and #35 SALMs are among the largest export SPMs in the world.

SOFEC conducted extensive model testing and determined mooring forces and system motions. SOFEC performed all geotechnical evaluation and designed the submerged, pile anchored foundations (mooring bases). SOFEC also performed all structural and mechanical design, which included huge fluid swivels designed for flowrates of 210,000 BPH of crude oil simultaneously with 20,000 BPH of bunker fuel oil.

## General Description

Client Name:	Arabian American Oil Co. (ARAMCO)
Contract Award:	1975
Installation Date:	1976
Application:	Crude and Bunker Oil Export

## Project Specifications

Water Depth:	36m (117ft) and 40m (130ft)
Tanker Size:	750,000 dwt
Dimension:	5.8mØ x 12m
Floating Hose:	2 x 24-in., 1 x 12-in.
Hawser System:	15-in. Dual grommet
Anchor Leg System:	6-in. Ø Single leg chain with rotary chain swivel
Anchor System:	4 x 60-in. Ø Piles with mooring base

## Comments

Each SOFEC SALM system incorporates a fully segregated dual product fluid swivel capable of 300,000 BPH crude oil simultaneous with 5,000 BPH bunker fuel oil. Actual crude throughput of 120,000 BPH is limited by the 24-in. maximum marine hose size. Even with the variety of crude oil passed through the system, these SPMs have loaded out over 1,000,000,000 bbls before any maintenance was required.