



Case Study

Operational Readiness

## Leighton Offshore Pte Ltd

### Iraq Crude Oil Export Expansion Project (ICOEEP)

The Crude Oil Export Facility of Southern Iraq currently exports approximately 1.8 MMBOPD from its offshore terminals. The South Oil Company's objective is to develop further offshore loading facilities to enable export capability of 4.5 MMBOPD.

The ICOEE project involved the construction of two 48" pipelines (approximately 8 kilometres onshore and 43 kilometres offshore) to two Single Point Mooring Calm Buoys. Crude oil tankers connect to the buoys via floating hose assemblies for crude oil offtake operations. Each calm buoy can be isolated from the pipeline via hydraulically operated subsea isolation valves and ESD valves. Onshore isolation of the pipelines is via pneumatically operated ESD valves, hydraulically operated isolation valves and electrically actuated valves. Crude oil is metered onshore at two metering stations. Electrical power is supplied by two diesel generators feeding into an HV transformer and subsequent LV switchboards. There are two packaged air compressor units for supplying instrument air.

K2 Technology Pty Ltd (K2) was engaged by Leighton Offshore Pte Ltd (Leighton) to provide specialist resources to develop the Computerised Maintenance Management System (CMMS) data for Phase 1 of the ICOEEP.

The Leighton project office was located in Dubai, the design office in London and the work carried out by K2 was completed out of the Perth, Western Australian office. The CMMS system chosen for the project by Leighton was MARSOFT, used extensively in the marine industry.

K2 used its proprietary Asset Data Analysis & Management (ADAM) software to build the asset register and develop the maintenance routines for the project. The project involved developing maintenance strategies and maintenance procedures in addition to capturing spare parts information.

The maintenance system was required to be operational prior to the first export of crude oil.

The South Oil Company successfully loaded its first offshore tanker through the new offshore facilities in April 2012.