



High priority new field project

The Satah al-Razboot (SARB) offshore oil field is located about 200km northwest of Abu Dhabi. The oilfield is expected to add an additional 100,000 barrels per day of oil to the overall oil production capacity of UAE upon commissioning in 2016.

The SARB Project is a high priority new field development. Drilling will be conducted from two artificial islands (SARB1 and SARB2) with the well fluid sent by subsea pipeline to a facility on Zirku Island for processing, storage and export. SARB3 is the precursor to the final SARB4 project after which production will commence and so it was imperative that SARB3 was completed in as short a time as possible.

Flexible supply arrangements

Amarinth was awarded the contract to supply 16 API 610 super-duplex pumps in C-series and A-series configurations to be used for various duties including fire water supply and diesel transfer.

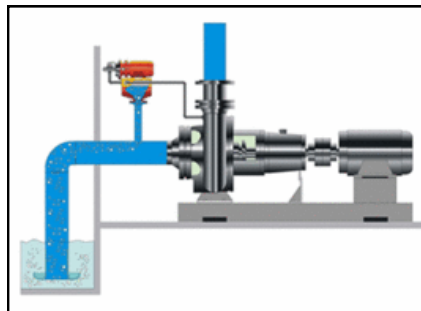
Due to the tight time constraints for SARB3 it was necessary to prioritise some of the pumps in order to meet the deadlines of the EPC contract.

Amarinth already had an intimate understanding of ADMA-OPCO specifications from previous projects it had worked on and so was able to provide a great deal of flexibility in scheduling the build and supply of pumps to ensure that all project deadlines could be met.

Self priming pumps

The duty of four of the pumps was to lift sea water to the rig. This meant that the pumps had to incorporate self-priming units so they were not running dry with the subsequent damage this would cause before the water entered the pump at the top of the lift.

Amarinth chose to deploy a vacuum technology to prime the pump before operation. When the centrifugal pump is turned on the vacuum priming unit will be first activated lifting the sea water to the centrifugal pump. The vacuum unit is then switched off via an integrated pressure switch as soon as the centrifugal pump has built up discharge pressure.



During the operation should there be any air accumulation and the discharge pressure drop below the switch point of the pressure switch, such as when sea conditions cause the water level to temporarily fall below the inlet level, the vacuum priming unit starts up once again to lift sea water and re-prime the pump. This enables the system to operate remotely with no services other than power, an important requirement for this new field development.

The vacuum priming method is also very efficient as there are no pump losses at the centrifugal pump compared with traditional integral fluid self-priming systems and furthermore the system has an inherent solids handling capability which is particular important in the offshore environment.

Extensive testing

ADMA-OPCO issued particularly stringent specifications for the pumps which included extensive material certification and contract documentation requirements. NDT and NDE testing was required along with full hydraulic testing before the pumps could be shipped, all of which Amarithh undertook within its modern and fully equipped facilities in the UK.



ADMA-OPCO

Abu Dhabi Marine Operating Company, ADMA-OPCO, is a major producer of oil and gas from the offshore areas of the Emirate of Abu Dhabi.

ADMA-OPCO currently operates two major fields - Umm Shaif and Zakum. The operations are centred on producing oil and gas and transferring the crude through a sophisticated pipeline network to Das Island for processing, storing and exporting.

"We were pleased that Amarithh could provide us with pumps for this project once again. The self-priming vacuum technology was particularly important for the reliable and remote operation of the sea water pumps and has proven reliable, economical and particularly easy to maintain."

Abdulla El Sherif
Lead Rotating Engineer
ADMA-OPCO