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GAS COMPRESSION

CLIENT



woodside **WorleyParsons**

Project: Enfield FPSO

Location: Offshore, Australia

Delivery: 2010

AUSTRALIA

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WORLEY PARSONS, ENFIELD FPSO, AUSTRALIA

The Nghanhurra is a floating, production, storage and off loading (FPSO) vessels for the Enfield oil development. The excess produced gas is reinjected into injection wells. The client required a low pressure gas compression system to boost the pressure feeding the high pressure gas compressors.

- Offshore on the “Nghanhurra” FPSO
- 3188kg/hr (4450Sm³/hr) of natural gas from 300kPaG inlet pressure to 920kPaG outlet pressure
- Screw compressor, Mycom 320LUD with 650kW flameproof motor
- 2 x 100% seawater-cooled titanium plate oil coolers

The system handles well pressure surges and operates at all load variations from 100% to 0% capacities, offshore in a corrosive environment off the coast of north-western Australia. Piping, including oil separator, is duplex stainless steel thermally sprayed with aluminium for long-term corrosion resistance.

Acoustic cladding is included to reduce the sound pressure level to <85dB(A)

Special considerations were necessary to allow for ship movements and loads. The load-tested skid structure is isolated from any movement or stresses in the vessel by a three point mounting system.

A Bently-Nevada machine monitoring system (MMS) is provided. The MMS outputs are incorporated into the PLC system and logic provided by REI, to monitor, control and protect the unit. The MMS and PLC control panel is located in the control room, whilst the package is located outdoors in a Zone 1 hazardous area. The unit was run tested by REI at Samsung’s shipyard in Korea before commissioning off-shore.



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