

Santos

Dorado Development Project

Project	Dorado Development Project										
Package Title	Produced Water Treatment Package										
Reference Number	0D200-AKR-R-00-SA-000007-001										
Package Description/ Scope of Work	<p>The Dorado Project is a greenfield oil development located offshore WA approximately 150km northwest of Port Hedland comprising of a Floating Production Storage and Offloading vessel (FPSO), Wellhead platform (WHP) and various subsea (SURF) equipment.</p> <p>The main purpose of the Produced Water Treatment Package (PWTP) is to reduce the hydrocarbon content to a suitable specification, at least < 30 ppmv total oil in water (dissolved + dispersed) for disposal overboard at the expected produced water flow rates for the entire life of field.</p> <p>The PWTP consists of a two stage hydrocyclone process (HP and MP) consisting of two epoxy/ glass flake lined carbon steel pressure vessels in series to remove free oil droplets from the bulk water phase and a Compact Flotation Unit (CFU) or an Induced Gas Flotation Unit (IGF), consisting of a single epoxy/ glass flake lined carbon steel pressure vessel, which performs a final polishing step to remove the remaining oil to meet the specified oil in water specification. All three vessels shall have specialist custom-designed internals.</p> <p>Incorporated within this package are associated pipework, control valves, manual valves and instrumentation together with interfaces with incoming fuel gas and produced water and outgoing reject and treated water for overboard disposal.</p> <p>The package supplier should recognize that there is likely to be relatively high concentration of dissolved oil in the water to be treated which may require the PWTP supplier to include treatment technology in addition to the equipment referenced above.</p> <p>The PWTP supplier will have the full responsibility to meet the required produced water quality for routing overboard.</p> <p><u>Equipment Particulars:</u></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Produced Water Flow Rate at Inlet, m3/hr</td> <td>134.77</td> </tr> <tr> <td>Pressure at Hydrocyclone Inlet, barg</td> <td>30</td> </tr> <tr> <td>Pressure at CFU Outlet, barg</td> <td>0.3</td> </tr> <tr> <td>Operating Temperature, Deg C</td> <td>77.6</td> </tr> <tr> <td>Oil content at Outlet, ppmv</td> <td>< 20</td> </tr> </table> <p>Supply of the package shall include design, manufacture, inspection, testing, painting, preservation, packing and delivery incl. provision of documentation for the PWTP package.</p>	Produced Water Flow Rate at Inlet, m3/hr	134.77	Pressure at Hydrocyclone Inlet, barg	30	Pressure at CFU Outlet, barg	0.3	Operating Temperature, Deg C	77.6	Oil content at Outlet, ppmv	< 20
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	<p>Packages shall be marinized suitably for offshore environmental conditions at the Dorado field</p> <p>Pre-Qualification Requirements:</p> <ul style="list-style-type: none"> • Must have minimum 5 years' experience in supply to the oil and gas industry. • Must have a list of past offshore project experience and preferably in delivering to offshore Projects in Australian waters. • Must have existing capability & capacity to deliver. • Must have an ISO quality system and OSHAS or similar certifications. • Must have storage capability for the manufactured products. <p>Must be able to provide after-sales services during operations in Australia</p>
<p>Specifications and Standards</p>	<p>The equipment shall be in compliance with National, International and Industry Standards, Australian and WA Regulatory requirements including, but not limited to the following.</p> <ul style="list-style-type: none"> • NOPSEMA requirements to ensure regulatory compliance. • National Standard for Occupational Noise [NOHSC:1007, National Standard for Occupational Noise, National Occupational Health and Safety Commission, 2nd Edition, July 2000]. • DNVGL-RU-OU-0102, DNV Rules for Classification of Offshore Units – Floating Production Storage and Loading Units. • DNVGL-OS-A101, Safety Principles and Arrangements. • DNVGL-OS-B101, Metallic Materials. • DNVGL-OS-D201, Electrical Installation • DNVGL-OS-E201, Oil and Gas Processing Systems. • Hull Piping: DNVGL-OS-B101/D101. • Hull Piping fittings: marine shipyard piping construction standard (as approved by Company). • Hull Pressure Vessels: DNV Rules for Classification - Ships Pt 4 Ch 7 “Boilers, pressure vessels, thermal oil installations and incinerators”. • AS 1210-2010 Pressure Vessels, incl. amendment 1 & 2 • AS 1200-2015 Pressure Equipment. • AS 3788-2006 Pressure Equipment - In-service inspection. • ISO. 3702. Control and mitigation of fire and explosions on Offshore Prod Installations. • ISO.15156 Parts 1 to 3 • EEMUA Document 191 Alarm system guidance. • ISO 13702 - Control and mitigation of fire and explosions on Offshore Prod Installations. • IEC 60079 series – electrical Apparatus for Explosive Gas Atmospheres. Aligned with equivalent AS/NZ standards • IEC 60079-10, Explosive Atmospheres – Part 10-1: classification of areas – Explosive gas atmospheres. Aligned with equivalent AS/NZ standards • IEC 60079-14, Electrical apparatus for explosive gas atmospheres, Inspection and maintenance of electrical installations in hazardous areas (other than mines). Aligned with equivalent AS/NZ standards. • IEC 60079-17, Electrical apparatus for explosive gas atmospheres. Electrical installations in hazardous areas (other than mines) Aligned with equivalent AS/NZ standards. • IEC 61508 Functional safety of electrical/ electronic/ programmable electronic safety related systems. Aligned with equivalent AS/NZ standards.

Santos

Dorado Development Project

	<ul style="list-style-type: none"> • IEC 61511 Functional safety. Safety instrumented systems for the process industry sector. Aligned with equivalent AS/NZ standards. • AS/NZS 3000:2018 Electrical installations design, construction and verification minimum requirements from Standards Australia. <p>Compliance with Class Society rules</p>
Delivery Place (if applicable)	Singapore
Full Scope Expression of Interest Closing Date	19-Nov-2021
Supplier Instructions	<p>Supplier(s) are to express interest via ICN Gateway where competency and previous positive experiences for similar projects can be demonstrated for equipment of a similar size and service.</p> <p>Supplier(s) will only be considered for receipt of the Tender if deemed suitably qualified by the Company's Procurement Entity.</p>
Contact	<p>All initial enquiries should be made through the Industry Capability Network Western Australia.</p> <p>Ray Loh Ray.Loh@icnwa.org.au +61 8 9365 7499</p>
URL	For more information about Santos please refer to their website www.santos.com