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Media Release

14 June 2022

WA DESIGNED OFFSHORE INSPECTION SYSTEM PUSHES FRONTIER OF ROBOTICS

Woodside has collaborated with industry to create a state-of-the-art offshore caisson cleaning and inspection tool (CCAIT system) that allows safe and cost-effective remote inspection of critical equipment on its offshore platforms.

The one-of-a-kind system was designed, developed and deployed in less than 12 months via a collaboration led by Woodside Energy (Woodside) and incorporating Perth-based expertise from Nexxis, Monadelphous, WOMA, and Fugro.

The CCAIT system incorporates a human-sized robot, designed to inspect the inside of caissons - vertical carbon steel pipes up to 70 metres long and up to 1.2 metres wide. These structures are used on offshore platforms to house critical equipment such as firewater and seawater lift pumps.

In response to possible COVID-related supply chain risks, a local solution was sought, inspiring the collaboration.

The CCAIT system is remotely controlled from a safe location on an offshore platform by skilled technicians. The tool is lowered inside the caisson via a tether and winch arrangement. Wheels are then extended to centralise the tool within the caisson, and probe arms extend to enable ultrasound inspection. A series of high-definition cameras stream video back to the technicians, with the data used by the asset team to define the forward plan.

Woodside Executive Vice President Technical Services Daniel Kalms said: "The CCAIT system removes the costs of mobilising tools from international locations, including the cost of delay in fractured supply chains. These can represent up to 50% of the total cost of an inspection campaign.

"It was incredible to see the team, including Woodside graduate robotics engineers, write software to dramatically improve the performance and usability of the tool. The project team was made up of people from local companies who came together and designed, procured, fabricated, tested, and validated a robotic solution during the height of a pandemic in under a year," he said.

Chris Heron, a coatings subject matter expert from Woodside's major maintenance partner Monadelphous, said: "Building a bespoke Ultra High-Pressure cleaning solution that can quickly remove marine growth to allow inspection without damaging the protective coatings was challenging and rewarding. We drew from our local supplier expertise and relationships to test the latest technology onshore and successfully lead the offshore deployment."

Nexxis Technology CEO (Chief Executive Officer) Jason de Silveira said Woodside's decision to partner with a local company demonstrated the strong sovereign capability of Australia's advanced manufacturing sector to develop and deploy cutting-edge robotic technology. "This collaboration highlights local capability and supports small to medium enterprises, creating jobs in the advanced manufacturing sector and pushing the frontier of robotics globally," he said.



(Representatives from Monadelphous, Fugro, Woodside and Nexxis)

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About Woodside Energy

We are a global energy company, proudly Australian with a spirit of innovation and determination. We provide energy that the world needs to heat and cool homes, keep lights on and support industry.

We aim to thrive through the global energy transition with a low-cost, lower-carbon, profitable, resilient and diversified portfolio.

Our recently expanded global portfolio includes quality oil and gas assets in Australia, Gulf of Mexico, Trinidad and Tobago, Senegal, Timor-Leste and Canada.

Our new energy opportunities include the proposed hydrogen and ammonia projects H2Perth and H2TAS in Australia and the proposed hydrogen project H2OK in North America.

This announcement was approved and authorised for release by Woodside's Disclosure Committee.