

+ WOODSIDE TURBINE CONTROLS SYSTEM UPGRADE PROJECT TURBO-MACHINERY SYSTEMS



+ PROJECT OVERVIEW

The Woodside Control Systems Upgrade (TCSU) project involved upgrading and replacing the control, safety and protection systems and instrumentation on twenty-one gas turbines at the Karratha Gas Plant. This \$135M project was successfully completed in 2011 after an intensive five-year program.

+ OUR SERVICES

The scope of our work included project management, implementation planning, design, hazardous areas engineering, vendor coordination, testing, installation supervision and commissioning.

The project involved twenty-one gas turbines (fifteen for gas compression, and six for power generation) and included the replacement of Turbine Speed Control Systems, Fire & Gas Systems, Condition Monitoring Systems, AVR and Protection (for power generators), replacement of Instrumentation and Sampling Systems and additional new instrumentation to raise the Safety Integrity Level (SIL) of the control systems.

DAD – System Information Modelling software was utilised for the design of Control and Safety Systems to ensure accuracy and to avoid time-consuming errors during the twenty-one critical shut-down periods.

+ THE RESULTS

The Woodside maintenance shut-down schedule for the gas turbines was strictly controlled so the challenge for our team was to perform the system replacement activities in these regulated short shutdown periods. Our team successfully achieved all the system replacement activities without causing any delay to Woodside's production planning.

Our technical knowledge, management expertise, design and commissioning accuracy, commitment to safety and effective co-ordination of activities exceeded Woodside's requirements and expectations for the project.

As stated by Woodside's Project Manager at Transfield Worley:

"The project delivered outstanding performance on key deliverables:

- Safety targets – zero incidents or injuries
- Quality – zero construction punch list items
- Schedule – P50 targets achieved on all shutdowns
- Compliance - SAP & maintenance systems integrated on time

A fantastic outcome and superb team performance."

+ CONTACT US

For further information about Turbo-Machinery Services please contact our Business Development Managers:

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