

WHS Awards – Innovation in WHS Award

Vertech Group is an inspection, access and specialist maintenance company. We are nominating for the Innovation in WHS Award relating to an inspection project carried out for the facility shutdown at the Inpex ILNG Facility in Darwin using Remote Digital Visual Inspection (RDVI) technology.

The nature and features of the innovation and its relevance or usefulness to WHS.

RDVI is the use of uncrewed vehicles to enter confined or difficult-to-access areas to conduct inspections to identify any degradation or damage. Inspecting and identifying degradation or damage to components or structures are hugely important as they can prevent catastrophic events from occurring, which could cause significant injury or environmental damage.

In the nominated body of work, the Vertech Group RDVI team sent robotic crawlers into pressure vessels on the ILNG facility to look for wall loss internally within these pressure vessels. Any identified areas of wall loss are then reported, with the information being sent back to the client engineers to determine if further inspection or remediation work was required.

RDVI significantly reduces the need for putting technicians in confined and dangerous spaces. This reduces the risk of injury through manual handling, and access issues minimise the need to put technicians in hazardous environments, which are very difficult to provide any rescues and also offer valuable and recordable data.






Attributes of the design, development, and implementation of the WHS innovation.

Vertech Group has developed and implemented various RDVI procedures to ensure this work's design, development, and implementation are conducted by our HSE team safely and effectively. Procedures designed and implemented include Inspection Methodologies, Data Back-Up, Equipment Maintenance, RDVI JHA's, and General Guidelines.

Vertech Group has robust HSE Management Systems in place that is accredited to ISO 45001:2018. These systems incorporate a whole suite of policies, procedures and forms, including all technical work methods, safe work techniques for confined spaces, toolbox talks, JHA's and management of change processes. The addition of RDVI processes enhanced our HSE Management Systems.

One of the primary focuses of the Vertech Group HSE Management system is continual improvement. As part of the shutdown for the previous year, Vertech had several soft tissue injuries, including strains caused by lifting and access issues. We wanted to ensure we applied continual improvement processes to learn from and mitigate against these.

As well as the RDVI technology that our technicians used to remove crewed access to pressure vessels and confined spaces, our WHS and HSE teams made several learnings in previous years and implemented numerous improvements to reduce injuries. These were very successful as no injuries or incidents were recorded by our HSE team on this significant project which incorporated 79 technicians and 20,485 person-hours. Some of these improvements are summarised below.

-  Roller trolleys to transport equipment to and from work fronts at grade and provide a more ergonomic workstation
-  Use of rope access hauling devices & custom lifting bags to ascend equipment to work fronts
-  Improved workstations for inspectors
-  Backpacks for transporting gear up and down stairwells
-  Toolboxes lifted into place for the inspectors to equipment can be left in proximity to the work fronts

The benefit or improvement in WHS that the innovation addresses or achieves, including potential benefits or broader industry or general application.

This project was a huge success, providing high-quality inspection data whilst enabling our technicians to complete the shutdown on time, within budget and without any incidents. The successful execution of this project paves the way for using RDVI as a reliable means of inspection on an increased scale and a more comprehensive range of applications. Any further learnings, developments and legislative requirements will be continually addressed to our WHS Management Systems to enhance our processes, delivery and execution regarding RDVI.







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