

Innovative ASCV retrofit saves time and money

INDUSTRY

Oil & gas, offshore

LOCATION

Middle East, UAE

PROJECT

Increasing the capacity of anti-surge cycle control valves

THE CHALLENGE

An offshore operator was increasing the capacity of compressors on a facility located off the Dubai coast. Consequently, critical anti-surge cycle control valves (ASCVs) involved in the compression system needed to meet exacting new requirements.

Procuring such highly-specified valves typically takes 24 weeks. The operator needed the valves within four weeks.

THE SOLUTION

Severn Unival's Technical Products and Services team devised an innovative retrofit solution. It involved the development of new internal components that could be fitted into the body of the existing ASCVs, increasing their capacity and maintaining performance in line with the complex demands of the new compressor system.

Activity followed a five step process

- 1 Valve stripped and relevant data gathered to inform the new internal design
- 2 Upgraded valve trim designed within 24 hours
- 3 Material sourced and components manufactured locally in the UAE
- 4 Valve reassembled and witness tested
- 5 Valve shipped back to the operator

Utilising Severn's concentric cage technology, new trim elements were sized and designed to offer comparable performance to the original valves, as well as having the same key dimensions, which allowed for the re-use of the original actuation and instrumentation.

Severn Unival managed the process and conducted the technical design, collaborating with our local repair partner Adyard Abu Dhabi for the manufacturing and assembly aspects. This partnership approach enabled advanced technical services to be combined with rapid turnaround for the operator's benefit.

The entire process took ten days for the first valve. It was then further streamlined enabling an additional valve with a completely separate design to be turned around in just four days.

THE OUTCOME

Each of the retrofitted ASCVs has been installed successfully.

Opting for a retrofit rather than procuring new valves shaved 94% off the delivery time. There was also a significant cost saving.



ASCV – Ready for assembly

ASCV retrofit satisfies extreme demands for technical capability and rapid turnaround