

A NOVASPECT, INC. SOLUTION

NOVASPECT AND EMERSON'S INSTRUMENT & VALVE SERVICES PROVE THEY CAN HANDLE ANY CONTROL VALVE REWORK PROJECT – NO MATTER WHO MANUFACTURED THE VALVES

Summary

Officials at a large Midwestern oil refinery were hesitant to delegate turnaround services on 30 critically important Valtek control valves to Novaspect supported by Emerson's Instrument & Valve Services (IVS), but the Novaspect/IVS team had been successfully handling other turnarounds at the refinery for several years, and given a chance to bid on this project, they won the contract. The experience, workmanship, and careful project management provided by the team on this job proved it could handle any control valve reconditioning project. In the end, they won the trust and respect of refinery management.

Key Benefits

- 30 critical Valtek valves were totally reworked at the nearby IVS Service Center.
- Project was completed on time despite encountering significant internal wear and damage. There were no surprises for the customer either during or after the outage.
- Refinery unit was restarted without incident.
- Customer was completely satisfied.

The Whole Story

The Novaspect/IVS team was given an unexpected opportunity to bid on a very important valve turnaround project involving the rework of 20 4-inch and 10 3-inch Valtek globe valves from the refinery's PSA skid, which produces hydrogen essential to the refining process. The skid, which is operated under a UOP license, uses Valtek valves exclusively for this difficult service with a very rapid cycle time. The valves open and close every 20 seconds with the plugs slamming hard onto their seats on every cycle. The potential for damage is great.

When it was time for the next turnaround in 2005, there was some question about who should do the job, because it is essential that the valves be returned to like-new condition before they are reinstalled. Entrusting these valves to Novaspect and IVS was a real vote of confidence from refinery officials, reflecting the fact that the team had been doing essentially all valve and instrument turnarounds at the facility for several years with excellent results.

When they toured the PSA skid prior to the turnaround, Novaspect and IVS team members were unable to obtain any diagnostics on the operating valves, but they noted certain conditions, such as scoring on valve stems, indicating possible internal issues with those valves. The original estimate included replacing soft parts such as gaskets, packings, guide liners, etc., as well as a provision for additional charges if repairs were necessary due to mechanical faults found inside the valves, positioners, or actuators. Refinery personnel, probably knowing internal damage existed, accepted the offer.

In July, refinery crews shut down the unit and removed all 30 valves, which were picked up and taken to the IVS Service Center in Oak Forest, Illinois. This well-equipped shop was given just three weeks to recondition these valves along with several Fisher control valves delivered at the same time. As each valve was opened and inspected, the refinery was informed of its condition and given a cost estimate for needed repairs.



As expected, a good deal of damage did exist, and additional work was necessary. Valve stems had to be machined to like new condition, and several cylinders on Valtek's piston-style actuators had to be replaced due to "excessive wear". An inspector from the refinery confirmed these findings, and the additional charges were approved.

The Service Center was able to obtain the needed new components quickly enough to complete all the repairs and return the valves to the refinery by the required date. After the valves were replaced and all connections made, the unit was started without a single issue, and it has been running well ever since.

The Novaspect/IVS team responded to the challenge of rebuilding control valves they don't often work with and did the job so well that refinery management was completely satisfied with the result. When it's time for the next turnaround for these difficult valves, the Novaspect/IVS team fully expects to do the job. In fact, they're looking forward to the next challenge.