Fisher Lifecycle Services Remanufactures Non-Standard Valves and Decreases Downtime for Refinery

RESULTS

- Decreased planned shutdown by one week
- Saved production of more than a half million barrels by quick replacement of valves

Because of the depth and expertise of engineering support, Fisher Lifecycle Services was able to remanufacture the valves based on the original, 40-year-old drawings and specifications.

APPLICATION

Refining

CUSTOMER

Refinery producing 75,000 barrels per day

CHALLENGE

During a planned shutdown, three valves critical to the HF Alkylation process were identified for replacement. The highly corrosive acid used in this process had significantly damaged the machined surfaces within the valves. These valves were of a non-standard design and replacements were considered unsuitable for the application.

The standard lead time for new non-standard valves is 18-24 weeks; the refinery needed the valves on-site in four weeks. The unit would experience significant revenue loss for every day of delay.

For more information:
www.assetweb.com/ivs

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SOLUTION

With only two weeks' notice, Emerson Process Management's Fisher Lifecycle Services responded.

Because of the depth and expertise of engineering support, Fisher Lifecycle Services was able to remanufacture the valves based on the original, 40-year-old drawings and specifications. Expert technicians disassembled the valves, neutralized them, identified under- and over-sized dimensions, weld repaired bodies, and replaced trim. Over 25% of each valve was remanufactured, using more than 100 pounds of weld rod.

Fisher Lifecycle Services also repaired a crude oil heater control valve. The valve had a hole that was compromising they minimum wall thickness of the valve body. With no alternative product available, technicians repaired the valve in one week; the standard lead time for a replacement of this kind is 28-32 weeks.

Fisher Lifecycle Services technicians verified all machined surfaces to original tolerances, provided PMI identification on alloy components, performed operational testing, and hydrotested all the alkylation valves. They also performed a liquid penetrant test on the crude oil heater control valve to verify the weld repair and to test for any discontinuities.

All the work was accomplished one week ahead of schedule, allowing the refinery to resume operations without the significant delays it was expecting.

The standard lead time for this type of replacement is 28-32 weeks. With advanced notice of a day and a half, Emerson turned the valve around in a week.

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