

Refinery in Spain Solves Compressor Surge Problems with Fisher™ Anti-Surge Control Valves

RESULTS

- Optimized refinery performance and reliability by upgrading to an anti-surge valve that passed stringent dynamic performance testing aligned with CPC requirements
- Minimized operational disruptions and related costs caused by frequent repairs and maintenance by switching to control valves optimized for compressor system use
- Overcame manufacturing and Shutdown, Turnaround and Outage (STO) timeline challenges by implementing SESE PRECOM process



APPLICATION

Compressor Anti-surge Valve in Fluid Catalytic Cracking Unit.

CUSTOMER

A refinery in Spain.

CHALLENGE

The existing anti-surge valve in the compressor system had aged from long years of operation. Despite frequent repairs and maintenance routines, the old valve continued to underperform, eventually greatly affecting plant performance and reliability.

To avoid further disruptions to operations and unexpected repair and maintenance expenses, the customer decided to reach out to the Emerson team in Europe for support. The initial order was an upgraded anti-surge valve for their upcoming planned Shutdown, Turnaround and Outage (STO). Later in the timeline, the customer also requested that the new anti-surge valve undergo a valve performance test with a certified compressor specialist at an on-site workshop.

SOLUTION

After thoroughly assessing the customer's application requirements, Emerson's Severe Service team in Europe identified the Fisher FBT 12x20" anti-surge control valve as the most suitable solution for the customer's compressor surge problems. It is specifically made for compressible fluids and high-capacity applications requiring noise attenuation. Its trim provides excellent sealing capability, minimizing noise regeneration at the valve outlet. Furthermore, its design compatibility with the high-performance Fisher 585C actuator, Fisher FIELDVUE™ DVC6200 digital valve controller and Fisher 2625 volume boosters offers opportunities for further upgrades.

Fisher anti-surge control valves minimize repair and maintenance frequency & costs at a refinery in Spain.



Fisher FBT Anti-Surge Valve

FISHER™ For more information:
www.Fisher.com


EMERSON™

The Fisher FBT 12x20" anti-surge control valve is also highly capable of stringent dynamic performance and complies with major end-users' and compressor OEMs' dynamic performance specifications for anti-surge valve applications. Most importantly, the short lead time for the collation of its parts eases the long lead time needed for the technical complexity involved in the manufacturing process and the limited time window for the customer's planned Shutdown, Turnaround and Outage (STO) schedule.

Severe service valves, such as anti-surge valves for compressors, require multiple rounds of technical revisions due to complexity and the involvement of multiple departments from both the end-user and engineering contractor sides. With this factored in, plus the challenges in logistics, performance testing and the customer's STO timeline, handling the order required high focus, continuous communication and risk mitigation strategies. In the end, the SESE PRECOM process enabled to ship the valve within a reasonable time.

The customer expressed satisfaction towards the SESE PRECOM team's dedicated professionalism in handling purchasing, manufacturing, testing and logistics challenges, including the parts supplier's summer closure and complexities experienced during testing. Above all, the customer was satisfied with their new Fisher anti-surge valve which detects when the compression stage is approaching a surge and subsequently takes action to reverse the movement of the operating point.



Side and front angles of Fisher FBT 12x20" anti-surge control valve at Cernay, France, manufacturing



The Fisher Anti-Surge Valve testing at on-site

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