

Valve Repair and QuickShip Service Avoids a Unit Shutdown and Potential Cost of \$1M USD Per Day

RESULTS

- Prevented the unplanned shutdown of a critical unit
- Avoided lost production costs of \$1 million per day
- Delivered parts, including a new actuator, in three days
- Scheduled and conducted an on-site valve repair that minimized risk and downtime



APPLICATION

A control valve actuator in separator letdown service

CUSTOMER

A hydroprocessing unit in a Texas refinery

CHALLENGE

The hydroprocessing unit within this refining complex is critical to overall production. It has a variety of Fisher™ control valves operating under severe service conditions such as separator letdown, sour water letdown, and flash drum applications. The performance of these valves is critical to the unit's availability and throughput.

One of the control valves, a Fisher 461 valve with a CL2500 pressure rating, Alloy 6 trim, and a 585C actuator was operating in separator letdown service with dirty fluids. In this severe service application, temperatures may reach 450 degrees Fahrenheit and pressure drops may be greater than 2000 psig. The valve's actuator wasn't responding as it should to control system inputs. Its lack of response caused output levels to fall below 50 percent. That means, plant profits fall 50%.

Operators had to manually control the process using a hand-operated valve. If this manual process failed, the resulting unplanned shutdown could potentially cost the refinery \$1 million per day.

After checking the assembly, the unit's maintenance team noticed that the actuator had been damaged, possibly by something falling from the contact tower above. They could not see any debris that would prevent the valve from closing, and the thickness of the valve wall prevented an x-ray. Because of the valve's importance, they decided to call their local Fisher product experts for help.

“Emerson’s local repair team and the parts they expedited helped us avoid a costly outage. The application expertise and service Emerson technicians provided improved the reliability of a critical valve.”

Automation & Electrical Category Manager
Texas Refinery

SOLUTION

Working together, application engineers from Vinson Process Controls in Odessa, Texas, and Emerson-certified technicians from the service center in Longview, Texas, facilitated an emergency repair. First, they decided what parts and tools they'd need to conduct an OEM-quality valve check and repair. Next, they contacted Emerson's supply chain for sourcing options and expedited delivery of the new trim and actuator in three days. Using Quick Ship resources enabled them to get the parts weeks ahead of the standard lead time.





Meanwhile at the refinery, Emerson personnel worked with the plant's maintenance team to schedule a planned shutdown that would manage risks and minimize downtime. An Emerson-certified technician delivered the parts, assisted refinery personnel with the on-site repair, and got the valve back in service, as scheduled.

The damaged actuator was sent to the local Emerson service center in Longview. Technicians repaired and returned it to the refinery, where it will be kept on hand as a spare.



For more details or to contact your local service center, visit [Emerson.com/LifecycleServices](https://www.emerson.com/LifecycleServices)

Emerson Electric Co.
Global Headquarters
8000 West Florissant Avenue
St. Louis, Missouri, 63136
United States
T +1 314 679 8984
ContactUs@Emerson.com
Emerson.com/FinalControl

 [Emerson.com](https://www.emerson.com)
 [Facebook.com/EmersonAutomationSolutions](https://www.facebook.com/EmersonAutomationSolutions)
 [LinkedIn.com/company/Emerson-Automation-Solutions](https://www.linkedin.com/company/Emerson-Automation-Solutions)
 [Twitter.com/EMR-Automation](https://twitter.com/EMR-Automation)

© 2018 Emerson Electric Co. All rights reserved. Fisher is a mark owned by one of the companies in the Emerson Automation Solutions business unit of Emerson Electric Co. The Emerson logo is a trademark and service mark of Emerson Electric Co. All other marks are property of their respective owners. The contents of this publication are presented for information purposes only, and while effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice. Responsibility for proper selection, use and maintenance of any product or service remains solely with the purchaser and end user. D352560X012 | May16