

Fisher Lifecycle Services' Outage Management Process Saves \$500K in Start-Up Costs for Fertilizer Manufacturer

RESULTS

- 35% increase in continuous days of operation, a new record of 475 days
- Elimination of more than \$500K in start up costs in the first year
- 60% turnaround work load increase with NO additional downtime and zero rework



APPLICATION

Nitrogen manufacturing facility, producing and distributing 950,000 tons of nitrogen fertilizer per year.

CUSTOMER

Nitrogen fertilizer manufacturer — Iowa

CHALLENGE

Proper maintenance of plant equipment is crucial to this facility's reliable and continuous operation. Maintenance management and technicians oversee an aggressive preventative and predictive maintenance program to inspect all critical equipment regularly. The plant operates 24/7 with planned turnarounds scheduled every two years.

The plant's primary feedstock is natural gas which accounts for 80% of its operating expenses. Unexpected shutdowns cost the plant hundreds of thousands of dollars in lost profit returns due to lost production time and vented gases. Every restart can cost as much as \$250,000 and the plant had historically encountered two or more outages per year.

The need to outsource control valve repairs during the next turnaround was solidified when a third party contractor verified issues during 2001 loop tests. The manufacturer wanted a contractor who could choreograph all the necessary repair work under one purchase order within the time frame specified.

"The service provided by Emerson during the 2002 outage far exceeded our expectations. Their ability for adapting to continuously changing conditions proved to be a positive asset for us."

Instrument and Electrical Supervisor

SOLUTION

Emerson Process Management's Fisher Lifecycle Services team was awarded the original order for rebuilding 57 Fisher® and other OEM valves in just 14 days. Using the Outage Planning Process, Fisher Lifecycle Services was able to provide a detailed plan of services to be provided, customized documentation for accurate record keeping, updated progress reports, and open communication during scope changes. Fisher Lifecycle Services also worked with maintenance managers during the outage to update and improve performance processes.

Once the outage execution began, the capacity of the project swiftly expanded to 82 valves, including gate and check valves. Fisher Lifecycle Services brought in all the necessary machinery and put their valve experts to work in a tent outside the plant, allowing 90% of the repairs to be done onsite. Additional parts were located through the Encore® program.

Although the work load of this turnaround increased nearly 60%, Fisher Lifecycle Services technicians were able to repair every valve on the expanded list in 11 days with no cost surprises and no re-work. The more than 1000 hours needed to complete the necessary repairs were all done under one purchase order, using Emerson as the single source provider.

Not only was the plant start-up on time, but the longest continuous operating period went from 352 to a record 475 days. Although a number of factors contributed to the plant's 35% increase in consecutive operating days, valve performance was crucial. The focused valve maintenance by Fisher Lifecycle Services technicians laid a foundation for the plant's continued success and the results are undeniable.

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