GROOME
Industrial Service Group

CASE STUDY FOCUS

Refinery Maintenance Services

TESTIMONIAL

"The Groome refinery maintenance team was able to find a solution quickly and implement the task as scheduled. This ensured we could get back to running at 100% and meet NOx emissions."

CLIENT

Gulf Coast Refinery

BACKGROUND

Refinery management contacted Groome as a boiler at a gulf coast chemical plant was operating at only 45% due to unknown issues with the SCR catalyst. The plant was exceeding NOx limits and was not generating enough steam to run at target efficiency.

OBJECTIVE

The refinery needed to clean their SCR bed immediately to improve backpressure and meet NOx permit. The Groome team provided a thorough inspection, which showed that the SCR was plugged with refractory on multiple layers of SCR catalyst. Groome was charged to come up with a way to conduct a complete cleaning of the SCR layers - and do it quickly!

SOLUTION

The Groome developed a plan to clean the SCR bed which included custom module fabrication, and completed this project on time, on budget, and with results that exceeded the plant manager's expectations.

RESULTS

Once Groome completed its work, the plant reported the following statistics for the before and after plant operations:

- The average NOx lb/mmbtu for the days leading up to the shutdown of the economizer was 0.013058 lb/mmbtu.
- The average NOx lb/mmbtu for the days following the startup of the economizer was 0.009527 lb/mmbtu.

The unit was operating at similar firing rates for both durations. This translates to a reduction of approximately 27% NOx lb/mmbtu.

The refinery experienced a 122% ($368,400) increase in daily revenue once Groome's cleaning and maintenance work was complete. The payback period for the project was just under 10 days.