



CASE STUDY FOCUS

HRSG Maintenance KinetiClean™ Tube Cleaning

TESTIMONIAL

“From initial contact, the Groome team was fully committed to working with our plant to find a custom, executable solution for our plant. They worked with each department to ensure all requirements were met so we could have a successful project. In the end, everything was completed safely and on time with a substantial improvement to our HRSG efficiency.”

- O&M Plant Manager



CLIENT

Southeast Combined Cycle



BACKGROUND

A gas-fired power facility in the Southeast corner of the U.S. contacted Groome after noticing an increase in backpressure and increased fuel costs on two of their turbines. These units are part of a combined cycle system that includes two GE 7FA gas-fired combustion turbines, one Alstom steam turbine and two Deltak HRSG's, which have been in operation for close to 20 years.



OBJECTIVE

The goal of this KinetiClean™ service was to remove accumulated salt, rust debris and other foulant from the cold-end HRSG tube bundles. Removing this debris is intended to decrease backpressure on the gas turbine, increase steam turbine output. The plant had used other vendors in the past but was looking to achieve better results with this new tube cleaning process.



SOLUTION

The ExPro division of Groome created a custom KinetiClean™ plan designed specifically for each unit based on the HRSG layout and amount of debris on the fin tubes. During the cleaning, samples of debris from both units were collected, tested, then properly disposed of by ExPro after the cleaning was finished. A total of seventeen, 12-hour shifts (8 full days) were needed to complete the 2-unit KinetiClean™ service.



RESULTS

Approximately 3 months after KinetiClean™, the plant saw between a 2-4 MW increase in output from both the gas and steam turbines. There was an even more dramatic step change reduction in HRSG pressure drop with an average of 1.5 inches of dP between both units. This drop in dP contributed to the improved MW increase and will also continue to reduce overall fuel consumption.

Additionally, stack temperatures decreased by 5°F in unit 1 and 10°F in unit 2, which is an indication of improved heat transfer in each HRSG and improved overall plant efficiency. An estimated 25 tons of debris was removed in total from both units and no damage to the HRSG's or fin tubes was reported.

