An oil refinery in Louisiana, refining 155,000 barrels of crude oil daily, markets oil products to gas stations in at least 26 states, as well as Washington, D.C. The plant uses 8,538 steam traps with 1,200-, 600-, 250-, 75-, 40- and 15-psi nominal pressures.

A Spirax Sarco, Inc. (SSI), steam system survey found that only 3,952 (46.3%) of the steam traps were operating correctly. The remaining steam traps experienced a variety of failures, including: 613 (7.2%) that failed open; 2,763 (32.4%) were cold; 1,012 (11.9%) that failed closed; 6 (0.0%) exhibited rapid cycling; and 192 (2.2%) were disconnected.

SSI also found performance and temperature issues with the HP sulfur reactors in the SRU units, largely due to the application of inverted bucket steam traps. Plus, as a result of excessive steam leaks, the sulfur reactors were creating a safety hazard. When SSI approached the refinery with the results, the management agreed that the sulfur reactors needed process improvement.

The survey uncovered more than $1.3 million in steam losses through failed steam traps and another $1 million in steam leak opportunities and production, process, safety and environmental improvements. The refinery approved the estimated $110,000 turnkey project, which offered a 5.3-month payback.

SSI recommended replacing the inverted bucket steam traps with 1-1/2-in. strainers and 1-1/2-in. flanged float & thermostatic steam traps. SSI also suggested that the existing trap discharge piping should be removed and re-piped with globe-style bypass valves and gate-style isolation valves to reduce flow velocity.

Based on the survey’s findings, the refinery has approved annual SSI steam trap surveys for the next three years, as well as an approved 2008 energy optimization budget of $600,000.

For further information please contact:
Spirax Sarco, Inc
1150 Northpoint Blvd, Blythewood, SC 29016
1-800-883-4411 • spiraxsarco.com/us