

Super Q[®]

Strategic Chemistry[®]

PUMP MAINTENANCE - REDUCING VIBRATIONS

THE CHALLENGE

Refined Technologies continues to work with refineries across North America to improve process efficiency using Strategic Chemistry[®].

Preventative pump maintenance is one example of how the patented Super Q[®] product and Vaporganic[®] process is improving reliability and operating efficiency.

A major Midwest refinery routinely inspects and monitors vibrations of rotating equipment to prevent equipment failure and avoid unexpected unit outages.

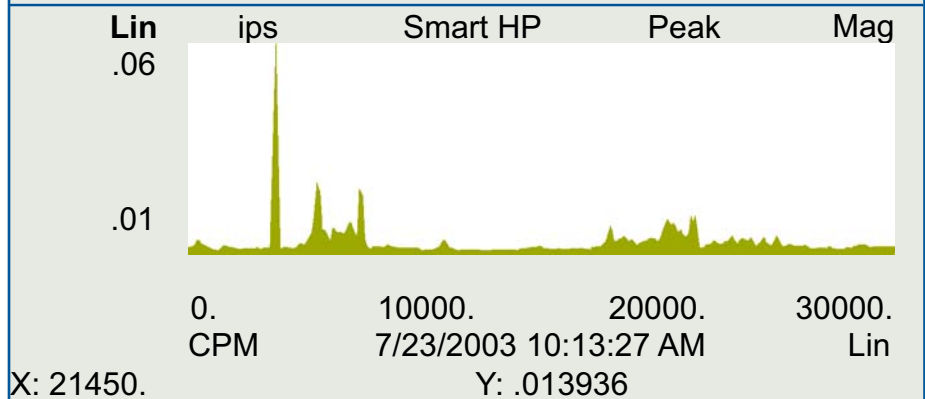
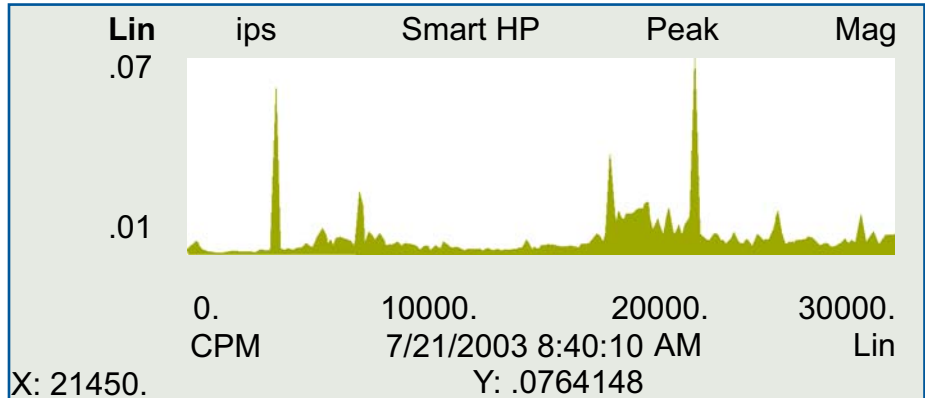
When vibration readings of a process pump exceed predetermined thresholds, maintenance is advised to take the pump out of service, disassemble, replace parts as needed, and return the pump to service. Pump maintenance is time-consuming and costly.

AN EXAMPLE

The refinery Coker Superintendent had been experiencing chronic vibration problems with the unit wash oil circulation pumps on his delayed coking unit. These pumps continually experienced peak vibration readings nearly twice the action threshold. After several pump repairs over the previous 10 months, the Superintendent began searching for a more effective and lower cost alternative for routine pump maintenance.

It was suspected that heavy hydrocarbon deposits on the pump impeller blades were causing an imbalance and increased vibration.

This Superintendent chose to use the Super Q and the Vaporganic process to clean the pump in-situ.



THE SOLUTION

The pump was blocked in and de-inventoried. Super Q was injected through a 3/4" bleeder on the pump suction and allowed to travel through the pump and vented through a 3/4" bleeder on the pump discharge. After the 30 minute cleaning, the pump was placed back in service and re-tested for vibrations.

As evidenced in the performance chart, the vibration reading was measured at 0.076 in/sec prior to the cleaning. Following Super Q, the vibration was reduced to 0.014 in/sec, returning the pump to its full operating capacity. This represented an 82% reduction in vibration, resulting solely from the use of the Super Q and the Vaporganic process.

THE SUPER Q ADVANTAGE

Refineries are using Refined Technologies' products and services to gain a strategic advantage in the marketplace. This application is another example of how refineries are restoring the operating performance of their equipment while lessening the burden on maintenance crews.

In your daily operations meetings, we encourage you to consider Strategic Chemistry: the timely use of chemistry and planning, engineered to improve operating margins.



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