CASE HISTORY

Industrial Water Treatment

RECORDED BENEFITS

- Intensive heat exchanger monitoring reduced by 85%
- $435,000 profit gain
- $5,000 per day production improvement
- 24/7 remote access to exchanger data

Performance Improvement Opportunities Identified with Cloud-based Heat Exchanger Modeling Tool

HexEval™ Online, Hydrothermal Stress Coefficient

Customer Challenge

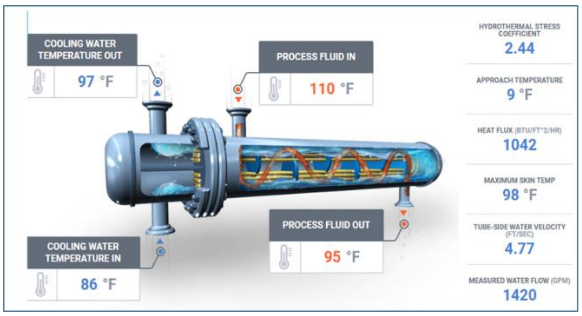
Large industrial facilities such as chemical and hydrocarbon processing plants can have hundreds of cooling water heat exchangers. Given the high stress conditions under which they operate, fouling and corrosion can cause failures, resulting in major operational and financial penalties. Even using American Petroleum Institute (API) guidelines, proactive identification of operationally challenged HX's has been time consuming and expensive.

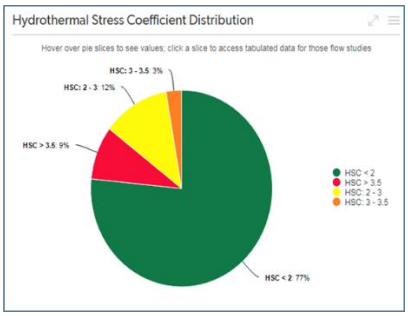
Recommended Solution

Solenis' proprietary HexEval heat exchanger modeling tool is cloud-based and utilizes algorithms to model heat exchangers. Based on decades of experience on thousands of units, Solenis has migrated this proven tool to a secure cloud-based platform. HexEval Online is a data historian that captures operating details, metallurgical and deposit analyses, historical events, increased analytical and data visualization along with corporation-wide comparison capabilities. Dedicated modules can also evaluate cooling tower and critical surface condenser performance. When HexEval Online is combined with Solenis' local field expertise, advanced cooling water chemistry and real-time analyzers, plant personnel have access to the most comprehensive utility water treatment solutions available.

Results Achieved

HexEval Online provides significant improvements by identifying struggling heat exchangers, prioritizing maintenance and targeting equipment and process upgrades. A refinery used HexEval Online to achieve an 85% reduction in HX that were being monitored intensively, freeing significant support resources to be redeployed to other priorities. Another refinery experienced an unscheduled shutdown, HexEval was used to quickly identify the exchangers that would benefit most from cleaning. In the 45 days following the "opportunity cleanings," performance improvement yielded $435,000 of increased profit. In a southern U.S. refinery application, HexEval Online was used to identify a heat exchanger which could be laid up. Cooling water was redirected to more productive uses and operating profit improved by $5,000 per day.





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