

HexEval™

Performance Monitoring Program

An advanced solution for predicting the performance of critical heat exchangers



- Improved reliability
- Increased asset time online
- Optimized use of resources
- Enhanced profitability
- Increased production
- Improved sustainability

Technology Overview

Heat exchanger efficiency is critical to the success of any industrial operation, yet many plants rely on inadequate data to assess the health of their heat exchanger networks. Solenis developed its HexEval™ performance monitoring program to address this issue. Using advanced monitoring and predictive modeling capabilities, this innovative technology enables decision-makers to identify, with confidence, which heat exchangers pose the greatest threat to reliable operation due to scale, corrosion and/or fouling. As a result, plant personnel can develop appropriate action plans.



State-of-the-Art Predictive Modeling

A HexEval implementation begins with Solenis experts working directly with plant engineers to assign a critical rating score to each exchanger based upon its impact on production if taken offline for cleaning or repair. The HexEval algorithm, developed from millions of hours of study time on thousands of heat exchangers, then analyzes flow study data of each exchanger, within the context of its design, to calculate a hydrothermal stress coefficient — a discrete value that can be used to assess the reliability of the heat exchanger and to identify factors threatening its performance.

Informed Decision-making

With the HexEval performance monitoring program up and running, plant managers have access to powerful predictive analytics. Not only do they receive early indication of potential issues that could impact plant performance and profitability, they are also able to predict future heat exchanger performance challenges. These potential “bad actor” heat exchangers are categorized by risk, making it possible to implement the right corrective action on the right equipment at the right time.

Historical Perspective

As part of the process, the Solenis team will help assemble a reference library of heat exchanger specification sheets, making it easy to find the design data of heat exchangers present in the network. In addition, HexEval offers an event tracking and archiving database that warehouses information on upsets and other lifecycle events, such as turnaround inspections, heat exchanger maintenance and replacement. These records are complemented with other valuable equipment data, making the HexEval repository a powerful data library that affords historical perspective on the campaigns of heat exchangers.

FEATURES	BENEFITS
Maximize heat exchanger performance	Improved reliability
Achieve longer runs between turnarounds	Increased asset time online
Focus resources on the most critical heat exchangers	Optimized use of limited staffing resources
Decrease operating costs and reduce capital expenditures	Enhanced profitability
Maximize exchanger efficiency between turnarounds	Increased production
Optimize freshwater and energy consumption	Improved sustainability

More Information

For more information about the HexEval performance monitoring program, please contact your local Solenis field representative or visit us online at solenis.com.

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