

Collaboration leads to safer heat transfer system

Eastman and KRAHN combine expertise with industry-leading heat transfer fluids to enhance Hungarian operation efficiency.

Situation

BorsodChem, a Hungarian chemical raw material manufacturer, has used Eastman heat transfer fluids (HTF) since 2011. The company sources Eastman Therminol® and Marlotherm® HTF through KRAHN Chemie GmbH, one of Eastman's authorized distributors in Europe.

Because synthetic HTFs have superior thermal stability and proven performance, Eastman fluids are primarily used in synthesis reactors and other production services in BorsodChem's operations. To support the heat transfer process, the company uses fluid heaters from German manufacturer INTEC Engineering GmbH.

During a visit to several BorsodChem sites, Eastman, KRAHN and INTEC representatives identified specific areas of improvements that would increase the overall efficiency of the heat transfer systems and the safety of the operators.

Analysis

During the team's review of the company's systems, they determined that the systems needed to be cleaned and refilled with fresh fluid.

The fluid in the heat transfer systems was continually topped up without regular sampling and assessment. Regular sampling of the HTF serves two important purposes: monitoring the health of the fluid and assessing the condition of the system itself.

In this case, the combination of normal fluid degradation and improper venting resulted in fouling of the fluid and the subsequent buildup of contaminants. Contaminated fluid does not flow easily through the heat transfer system, leading to decreased operational efficiency.

Solution

The systems at BorsodChem were refilled with fresh Marlotherm products tailored to meet their unique requirements. Marlotherm SH has a low viscosity and a high boiling point, while Marlotherm LH accommodates a wide temperature range and versatility for both liquid and vapor phase systems.

To monitor and maintain the health of the fluid and systems, KRAHN helped introduce Fluid Genius — Eastman's advanced HTF analysis software. Fluid Genius helps forecast fluid issues that could impact fluid quality, production schedules and maintenance budgets.

Eastman, KRAHN and INTEC also hosted on-site training and safety seminars to educate operators on best practices on safely working with and maintaining their heat transfer systems. INTEC was integral to the solution in demonstrating proper use of the installed automatic venting function.

Result

Implementing these measures improved overall operations. Plant management reported improved employee morale, increased site safety and reduced downtime due to unscheduled maintenance. These efforts demonstrate the commitment of Eastman, KRAHN and INTEC to support customers like BorsodChem in optimizing its heat transfer system, enhancing productivity and ensuring the well-being of its employees.

For more information or product support, contact Eastman or one of our certified distributors.

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