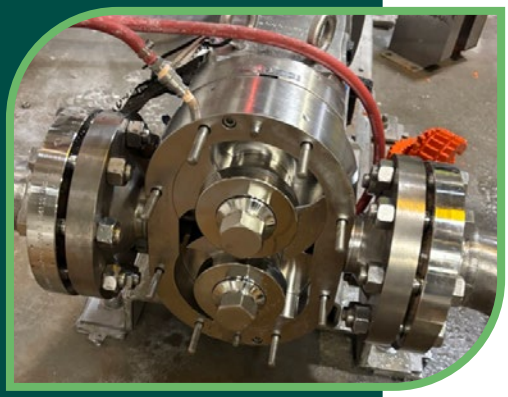
CHEMICAL FACILITY SAVES $120,000 ANNUALLY

Waukesha Cherry-Burrell® U2 ND Positive Displacement Pump with Diffusion-Hardened Rotors

Challenge

A leading manufacturer struggled with frequent rotor failures caused a chemical processing facility relied on Hydra-Cell plunger pumps to transfer two corrosive acids—fumaric and malic acid. Although the application appeared straightforward, the process was plagued by reliability issues. The acids' crystallizing nature led to fluctuating and high solids content, scaling, flaking and pressure spikes within the system. These factors caused frequent pump failures, leaks and repair costs that exceeded $30,000 every few months. The repeated breakdowns resulted in avoidable downtime, increased labor demands and heightened safety risks from acid exposure.



Solution

To address these challenges, the facility installed two Waukesha Cherry-Burrell (WCB) U2 ND 060 Positive Displacement Pumps. The pumps' durable yet simple external circumferential piston (ECP) pump design and smooth, pulse-free operation proved well-suited for the acids' crystallizing characteristics. Paired with a gear reducer and variable frequency drive for flow control, the system required no major modifications. Built from corrosion-resistant materials, specifically the diffusion-hardened stainless steel rotors, the WCB pumps handled scaling, solids and variable viscosity without measurable wear or loss in performance.

Result

The facility's switch to WCB U2 ND pumps delivered leak-free, reliable performance, eliminating over $120,000 in annual repair costs while handling corrosive fumaric and malic acids with ease. Building on this success, we are working with the team to explore larger WCB 180 models for future expansion - transforming a simple pump replacement into a long-term reliability and process improvement strategy.

www.spxflow.com/waukesha-cherry-burrell

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WCB_U2-ND-Hydra-Cell_SSTR_US

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