

Impeller Trim Saves Heileman Brewery \$19,000 a Year

efficient manufacturing

PROJECT RESULTS

- Energy savings:
508,000 kWh/yr
- CO₂ reduction:
682,000 lbs/yr
- 211% ROI

A cooling system that can't keep up with beer demand is bad news for any brewery—as the Heileman division of Stroh Brewery Company found out. But an in-depth study of their cooling pump system, and an impeller trim, got their system back up to par while saving them \$19,000 a year in energy costs. On top of that they now have a pumping system that's twice as efficient.

COOLING BEER IS HOT TOPIC

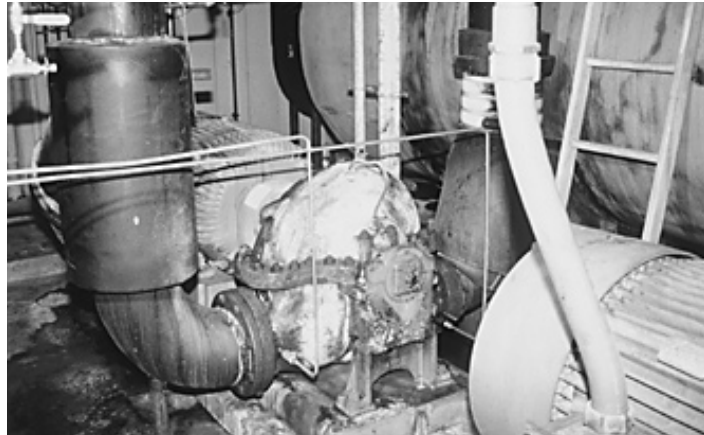
"We couldn't have as many fermenters on as we would like to have," reports Dan Schaller, former plant engineer at the La Crosse facility. The system that cooled the tanks wasn't up to the increased demand, and tanks would overheat.

Schaller had wanted to improve the cooling system for years. "But we needed to study the whole system," he says. "We needed someone to look at the tanks and see what the load was at different times on different days. We didn't want to go in and make changes without pre-engineering."

TRIM MORE

Heileman focused on a 150 horsepower pump that was used continuously but was heavily throttled. Brewery staff had closed the gate valve on discharge to keep the motor from exceeding its rated amps, and they had once trimmed the impeller with little effect. An in-depth performance optimization study showed that the impeller needed to be trimmed much more.

Brewery staff trimmed the impeller again, more drastically. "Then we could finally open the system wide open, so we now get more flow and better heat transfer," Schaller says.



And Heileman was able to reduce kilowatt-hours by 50 percent by going from a 150 horsepower motor to a 75 horsepower, high-efficiency motor.

\$\$, PRODUCTIVITY, EFFICIENCY—ALL UP

The improvements are saving them \$19,000 a year. And because they've got a more efficient system—the system efficiency more than doubled with the adjustments—Heileman has had fewer problems keeping their tanks cool and has increased productivity. "I'm really happy with the feasibility study and the improved cooling that resulted," Schaller says.

By optimizing the performance of this cooling pump, Heileman Brewery was able to downsize the pump motor from 150 to 75 hp. As a result, they're saving \$19,000 a year in energy costs and enjoying higher productivity and fewer maintenance problems.



**ENERGY CENTER
OF WISCONSIN**

We show you how

595 Science Drive
Madison, WI 53711
Phone: (608)238-4601
Fax: (608)238-8733
email: ecw@ecw.org
www.ecw.org

For more information about optimizing your pump systems, write to us or send us email at industrial@ecw.org. Ask for our brochure and optimization checklist. We also offer training and referrals to qualified experts.