Press release

De-risking investments with proof: Why physical trials still matter

As food, dairy, beverage and pharmaceutical manufacturers face growing pressure to maximize returns on capital investments, demand is growing for solutions that reduce risk before major production decisions are made. Even with digital tools such as digital twins becoming increasingly important for evaluating process options, physical validation remains the ultimate proof point, particularly when it comes to assessing the impact of processing conditions on product integrity or validating cleanability.

Kolding, Denmark: This is the reality at Alfa Laval's Application & Innovation Center in Denmark, where customers from around the world test equipment and processes under real production conditions before new investments.

"The trend is clear. Customers want certainty", says Jens-Aage Larsen, Head of Alfa Laval's Application & Innovation Center. "Digital twins are excellent for screening different solutions, while physical trials provide proof. By testing under real operating conditions, we help eliminate guesswork, validate performance, protect capital and enable producers to move forward with confidence based on documented facts."

Putting pump performance to the test

With three to four trials a week, the Alfa Laval Application & Innovation Center is busy testing a range of hygienic fluid handling and heat transfer technologies. One recent project involved a leading European sauce manufacturer seeking to modernize its pumping technology. The objective was to upgrade the existing pump solution while maintaining performance, improving cleanability and ensuring gentle handling of delicate sauce formulations.

A series of validation trials provided clear answers. Using real recipes, the customers' own ingredients and similar process conditions, the trials compared several pump technologies against key criteria, i.e. the ability to handle products with varying viscosities and gentle transfer of sauce mixes containing particles such as onion pieces.

The trials confirmed that the positive displacement pump DuraCirc® demonstrated the optimal combination of pressure capability, product protection and cleanability in both high-volume production and smaller batch operations.

Based on the trial results, the sauce producer decided to implement a phased upgrade programme, replacing more than 40 pumps across its facilities.

Collaborative effort makes for a sound business case

Every trial at the Application & Innovation Center is a collaborative effort involving the manufacturer, system integrators and Alfa Laval's industry and application specialists. Although based in Denmark, the Center supports customers worldwide. Many customers choose to attend trials in person to see, hear and evaluate equipment performance firsthand. But if this is not possible, Alfa Laval offers live-streamed testing sessions with real-time interaction and discussion throughout the process.

"Whether customers join us on-site or remotely, the process is highly collaborative", says Jens-Aage Larsen. "We test, evaluate and optimize together. Afterward, customers receive a full report documenting all facts and findings, giving them a solid foundation for investment decisions."

This is Alfa Laval
Working closely with customers and partners worldwide, Alfa Laval challenges conventional thinking on engineering, quality, and innovation. Together driving the solutions of the future, inspiring progress towards a more resourceful, less wasteful world.

Alfa Laval is set on creating positive impact in areas that society depends on, including energy, food, water, medicine, maritime transport and offshore operations. As a leading global provider of solutions in heat transfer, separation, and fluid handling, the company collaborates closely with many industries to optimize efficiency, reduce emissions and increase yields.

Alfa Laval was founded more than 140 years ago, has customers in over 100 countries, employs more than 23,500 people, and annual sales were 69.6 BSEK (6.6 BEUR) in 2025. The company is listed on Nasdaq Stockholm.

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