



Rotary jet head tank cleaning machine retrofit boosts yield and environmental profile

Major global food and beverage manufacturer, Thailand

Case story



The Thai subsidiary of a global food and beverage manufacturer retrofitted existing tanks with Alfa Laval TZ-74 Rotary Jet Head tank cleaning machines to improve food hygiene and safety, conserve water, boost its environmental profile and increase productivity.

The Thai subsidiary of a global food and beverage manufacturer wanted to improve tank cleaning operations at its factory located about 30 kilometers outside of Bangkok. The manufacturer turned to Alfa Laval and Tetra Pak to retrofit existing tanks with rotary jet head tank cleaning machines. Improving tank cleaning operations translates into higher standards of food hygiene and safety, better water management as well as more uptime and higher yield.

The global food and beverage manufacturer is committed to enhancing quality of life and contributing to a healthier future and, at the same time,

striving for zero environmental impact in their operations. So it comes as no surprise that the manufacturer is always looking for new ways to improve its operations while creating shared value and minimizing its environmental footprint.

Tank cleaning can result in high water consumption especially when the nature of the product demands frequent, thorough tank cleaning. Committed to operate more efficiently, the manufacturer worked closely with long-term partners Alfa Laval and food processing and packaging solutions company Tetra Pak to find the right solution to optimize tank cleaning at the plant.

Successful trial led to new rotary jet heads

After discussing how to improve tank cleaning processes at the factory, the manufacturer agreed to test the performance of an Alfa Laval TZ-74 Rotary Jet Head in one of its tough-to-clean tanks. The test was conducted on three separate occasions and all three tests showed positive results with higher tank cleaning efficiency than the traditional static spray balls installed throughout the plant. Compared to the plant's regular 30-minute cleaning cycles, the efficient 15-minute trial cleaning cycle convinced the manufacturer to install Alfa Laval TZ-74 rotary jet heads in eight of its tanks at the plant almost right away.

“Retrofitting our tanks with Alfa Laval TZ-74 rotary jet heads helps ensure food hygiene and safety while saving water, time and money.”

– Process engineer at the global food and beverage manufacturer

Higher cleaning efficiency

Switching from traditional static spray balls to Alfa Laval TZ-74 Rotary Jet Head tank cleaning machines helped contribute to significant cost savings in terms of conserving energy and water as well as reduced use of cleaning agents and less waste treatment. This is in line with the food and beverage manufacturer’s strategy to improve sustainability across its global operations towards zero environmental impact.

Cleaning quality provides true peace of mind

The high-impact jet stream from the four-nozzle rotary jet head is engineered to cover the entire interior surface of the tank in a successively denser indexed cleaning pattern. This provides a powerful mechanical impact, using a low volume of water, acid or caustic. The flow of the

cleaning fluid makes the nozzles perform a geared rotation around the vertical and horizontal axes.

In the first cycle, the nozzles lay out a coarse pattern on the tank surface. Subsequent cycles gradually make the pattern denser, until a full pattern is reached after eight cycles. This takes place automatically, providing users with an effective path to quality assurance guarantees in tank cleaning, complete with all the necessary documentation.

More importantly, high impact cleaning in a 360° repeatable cleaning pattern means full cleanability inside the tank, shorter cycle times and greater energy savings. It also translates into processing more batches of product, which impacts plant safety and hygiene as well as productivity and profitability.

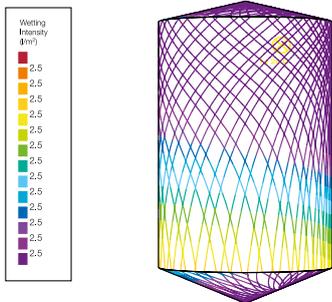
Easy retrofit

Short delivery time and full technical support meant that the Alfa Laval TZ-74 rotary jet heads were easy to install and were quickly up and running. Retrofitting the tanks only required minor modifications to the traditional static spray openings in the tanks and the installation of flexible hoses.

Trustworthy partners

From needs analysis to start-up and commissioning through to service and support, Alfa Laval continues to partner with Tetra Pak to optimize processes at the factory. Ensuring top performance of Cleaning-in-Place processes by retrofitting static spray balls with rotary jet heads is just one example of the many ways that the partner companies have helped the food and beverage manufacturer cut costs, save time and boost both productivity and sustainability.

“We appreciate the time, effort and expertise that Alfa Laval and Tetra Pak dedicated to improving the cleaning efficiency of our hard-to-clean tanks,” says the global manufacturer’s process engineer. “We look forward to continued collaboration.”



The Alfa Laval TRAX software program simulates tank cleaning using a high-impact jet stream from the rotary jet head using less fluid and less energy than static spray balls.



The Alfa Laval TZ-74 Rotary Jet Head tank cleaning machine provides exceptional cleanability, better end-product quality, greater overall output and reduced operating costs.

Fast facts

About Alfa Laval

Alfa Laval is a leading global provider of specialized products and engineered solutions. Our equipment, systems and services are dedicated to helping customers optimize the performance of their processes. Time and time again.

About Tetra Pak Thailand

Tetra Pak, an Alfa Laval Global Alliance Partner, is the world’s leading food processing and packaging solutions company.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com