

Water and energy savings pay back plant upgrades in only four months

For decades, the production facilities of a leading South African ice cream producer had expanded, using various component suppliers and leaving the service and maintenance tasks quite complex, time consuming and with a costly stock of many different spare parts.

As part of the upgrade strategy, the company wanted to operate production equipment from one supplier only and to invest in equipment that would allow them to fulfil the sustainability goals of the company, including savings on water, energy and carbon footprint. The first step was to replace ten valves with Alfa Laval valves mounted with ThinkTops that will potentially save 165,000 litres of CIP liquid every year with corresponding cost and energy savings.



Going standard saves cost and simplifies maintenance

When the leading South African ice cream producer decided to simplify and upgrade their production equipment, they contacted their long-term service partner IPS (Innovative Processing Solutions) to assess the current set-up and plan the right path forward.

Standardization became a keyword in the upgrade project alongside strict requirements to hygienic performance and high reliability. After the initial assessment, IPS proposed to base the upgrade solution on Alfa Laval components in order to increase efficiency in daily production and in maintenance routines.

The proposed solution resounded with the customer, and as a first step IPS replaced ten valves with Unique Mixproof valves from Alfa Laval, each with a ThinkTop to optimize Cleaning-in-Place.

Moreover, with IPS as Authorized Alfa Laval Service Partner, the ice cream producer got easy access to genuine spare parts, a well-planned maintenance plan and fast technical support to avoid costly downtime.

“We are proud to support the growth journey of one of the leading ice cream producers in the world. Our close partnership with Alfa Laval allows us to make a real difference for the customer in achieving their goals of a more standardized and efficient manufacturing set-up, lower maintenance costs and more sustainable ice cream production”, says Hulisani Mudau, Technical Director at IPS.

Saving 165,000 litres of water for CIP every year

IPS used Alfa Laval’s Joules calculator to estimate the water and energy savings of the new equipment. Compared to the old solution, the new set-up is expected to save 165,000 litres of water every year, translating into a cost saving of EUR 70,000 including reduced energy and chemical costs.

Additionally, costs are saved for reduced waste water handling but this is not included in the calculations.

“Joules is an excellent tool to calculate savings before the actual investment. We used Joules to document the potential savings of different solutions, which provided valuable input to the decision process around the upgrade strategy of the plant”, says Hulisani Mudau.

The water savings translate into significant savings on energy consumption for pumping and cost savings for purchase of water, chemicals and energy. At the same time, the load on the waste water treatment facilities is reduced.

Based on the positive experience of the first production upgrades, the upgrade project will continue in the coming years in order to continuously improve productivity, cut maintenance costs and realize substantial savings on water and energy.

Facts about the solution

The ten DN50 Unique Mixproof valves are each mounted with an Alfa Laval V70 ThinkTop, which cuts water consumption during CIP by up to 90%, whilst reducing contamination risks by confirming the cleaning. The savings on CIP liquid translate directly into significant savings on energy and costs for water heating, pumping and wastewater treatment as well as reduced use of chemicals. A simple and sustainable upgrade that in this case paid back in just four months and promises a long and reliable service life.



165,000

litres of water saved every year



€70,000

in cost saving, including reduced energy and chemical costs



5

tonnes CO₂ emission saved every year



Hulisani Mudau, Technical Director at IPS.

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Contact Alfa Laval

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