



## Konvex boosts pump uptime with smart IoT app

Konvex AB, part of the Saria Group, receives and processes animal and vegetable by-products from both Swedish abattoirs and animal owners through sterilization and through the Biomal concept, a comparatively new, simple process for converting residuals to fuel through crushing and grinding. JS Proputec pumping systems form part of Konvex's production apparatus to convert animal by-products into biofeed, fats and environmentally friendly biofuels such as meat and bone meal.

Marcus Andersson is Konvex's Maintenance Manager. It is his job to keep things running smoothly and efficiently – a task that requires him to keep up with developments in the industry that could make a difference to the company's operations.

"Innovation has always been part of the Konvex approach," he says. "Biomal, for example, was created by a small group of companies with Konvex playing a leading role."



*Marcus Andersson  
Maintenance Manager at Konvex*



*The JS Maintenance Mate® box enables LIVE pump data.*

In 2019, the company became involved in the development process for a new, 'plug-in' device with the potential to significantly reduce pump downtime.

Designed by JS Proputec and known as JS Maintenance Mate®, the device is an IoT ("internet of things") solution - a small, electronic unit that monitors wear and tear data on individual pumps. Pump operators can now 'see inside' each pump, predicting potential breakdowns with a high level of accuracy. Controlled via an app, the device will soon be standard on all JS Proputec pumps and can easily be retrofitted to existing units.

## **Crucial continuation**

Konvex has three JS LAP350 pumps running in its production process, with an additional pump as back-up. In 2020, the company replaced one of its JS LAP350 units and added two new pumps, one with larger capacity. Konvex's Production Manager, Taisto Tikkanen, is keenly aware of the need to keep the company's pumps in working order. "We use our pumps to recycle our product. If a pump breaks down, the product stops moving and very quickly becomes damaged – it begins to separate, leaving only water at the bottom of the tank. Dealing with the consequences of a pump breakdown, therefore, takes a lot of extra work. So, we really need to know that our pumps can keep on working."

## **Innovation in the field**

After hearing about JS Maintenance Mate®, Taisto Tikkanen was immediately interested. "I agreed with Marcus that he could try it out in our process, because it's always good to know how well the pump is working, and how much more we can use it before it breaks down. Most importantly, we wanted to remove those unwelcome surprise moments that stop the production plant operating."



*Marcus Andersson and Taisto Tikkanen (left), Konvex met with CEO at JS Proputec, Anders Ryttner Madsen (right) to get a full introduction to the JS Maintenance Mate® concept.*

Marcus Andersson picks up the story: "We visited JS Proputec in Denmark to see the device and hear more. And it did not take long before we had agreed to trying out a prototype in the factory. Today, we've got them installed on all our pumps."

"JS Proputec's technician installed the devices for us – but the procedure looks pretty easy," he continues. "Since then, we have been excited to play a role in the development process, requesting pressure and temperature data, for example, which are two key things for us to know."

## **Expected gains**

At this point, the precise level of downtime reduction enabled by JS Maintenance Mate® has yet to be fully determined, but Marcus Andersson is confident of a positive result:

"Our pumps break down for a total of around 800 hours per year. That is hardly surprising, given the nature of our product, and because some of the pumps work around the clock. With JS Maintenance Mate®, we expect to stay well ahead of most breakdowns, bringing downtime to a minimum by giving us plenty of notice to renovate the pump."

## **Sustainability power**

Sustainability is important to Konvex, which works in tandem with nature, returning organic materials to circulation. The company strives to continually ensure that its production processes are as protective of the environment as possible and implements a variety of emission-limiting measures to achieve this aim. Here, JS Maintenance Mate has a role to play, too. As the lamellas in individual pumps wear down, the required RPM for the same throughput begins to climb beyond the initial, optimized level. Naturally, this requires more electricity. But with JS Maintenance Mate®, wear can be minimized, and components swapped out to keep things running in the most environmentally friendly manner.

Over the months and years to come, Konvex will continue to work closely with JS-Proputec, taking an active role by contributing real-world data and usage experiences to aid the further development of this promising new device.