

Efficiency and environmental benefits from real-time data

Endress+Hauser redesigned the measurement of wastewater generated by Kupariteollisuuspuisto



Kupariteollisuuspuisto, one hundred hectares in size, is located by the Kokemäenjoki River, in Pori, Finland. Kupariteollisuuspuisto is home to several international companies as well as their partners and sub-contractors, who demonstrate a high level of excellence and expertise in their field.

The operators of the Kupariteollisuuspuisto industrial park in Pori wished to develop the measurement technology used to sample the wastewater generated by the area. However, the cooperation with Endress+Hauser proved even more fruitful, as it produced a solution that makes use of self-measuring devices and cloud services to provide benefits to operators and the environment alike.

The Kupariteollisuuspuisto industrial park in Pori is home to many leading Finnish and international metal industry and technology companies as well as some 1,400 skilled workers in the industry. The cooperation between Kupariteollisuuspuisto and Endress+Hauser kicked off in spring 2021, when the industrial company Luvata decided to develop its sampling process.

“Everything started from the need to replace the sampling equipment.

However, Endress+Hauser’s experts made us realize that there is even more potential for development in the process,” says Real Estate Manager **Kristian Lehtonen** from Luvata.

“In the preliminary design phase, we conducted a broad survey of the needs and wishes for the site and concluded that, instead of making a superficial change, we wanted to offer an automated and reliable solution genuinely beneficial to the client,” says Endress+Hauser’s **Tomi Metsä-Keisteri**, who was the project manager and principal designer for the site.

Endress+Hauser’s proposal was received well, and the cooperation expanded to cover five operators in the area and their shared wastewater management process. After the design phase, the redesign process progressed quickly. The installations were carried out in summer 2021 and the documentation was provided to the client in November.

Ensuring environmental safety with high-quality measurements

In Kupariteollisuuspuisto, measurements are carried out in five measuring wells. The positions are critical, as flow-based measurements are used to calculate the area's total emissions.

"We use measurements to make sure that the water discharged from the area meets the environmental authorities' requirements for water quality. Based on the results, we are able to monitor the variation in water quality and minimize our environmental impact," says EHS Director **Saara Koski** from Luvata, who chairs Kupariteollisuuspuisto's environmental group.

As a result of the redesign process, Kupariteollisuuspuisto was supplied by Endress+Hauser with self-measuring products and a cloud service that allows the measuring results to be viewed regardless of time and place.

"Thanks to the measuring results being transmitted to the internet in real time, we can see up-to-date results. Modern data analysis tools convert the data into graphs that are easy to interpret, which also facilitates the monitoring and analysis of variations afterwards," continues Sales Manager **Martti Ikonen** from Endress+Hauser.

"Above all, this more reliable and higher-quality measurement ensures the efficiency and environmental friendliness of our operations," Lehtonen continues.

Agile partnership and project expertise built on experience

The partners selected to support the implementation were companies of which Endress+Hauser has positive experiences. The equipment was installed by Elcoline, while Rejlers was responsible for the electrical engineering and Innotect handled the implementation of the cloud services. From the client's perspective, Endress+Hauser's project management skills in particular were of the utmost importance for a successful end result.

"Everything was taken care of through Endress+Hauser, from the design to the equipment, installations, cloud service and commissioning. This turnkey model is effortless and risk-free for the client because it involves one party bearing the responsibility for the overall implementation of the project," Metsä-Keisteri points out.

Endress+Hauser is happy that the cooperation, which previously only covered equipment, expanded to cover the entire process. All of the parties involved consider the outcome to be a success, and cooperation will continue

with Kupariteollisuuspuisto in the form of a service contract. "Turnkey deliveries provide a more in-depth understanding of the site's needs and technical solutions. This means that we also learn a great deal from them. Now we can share the knowledge we gained in Kupariteollisuuspuisto forward with our organization and clients," Ikonen states.

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