

THE NEW BUZZWORDS AT THIS FOUNDRY'S PAINT SHOP? DATA CONNECTIVITY



"Considering pumps, we have put a lot of emphasis on SCADA connectivity here at BIRN," says Jens Vallentin Hansen, project manager, CED coating unit at Vald. BIRN A/S foundry in Holstebro, Denmark.

THE SITUATION

The new, surface treatment "paint shop" at the Vald. BIRN A/S foundry in western Denmark puts tough demands on its equipment. Built onto this century old factory four years ago, the surface treatment unit takes thousands of castings daily made onsite through several baths of liquid, chemicals and paint in its Cathode Electro Deposition (CED) system, with an option of powder coating.

BIRN – one of northern Europe's largest foundries – produces the cast iron components for different industrial customers including automotive customers demanding the highest quality standards. "In this plant, we get castings that we clean, first of all," says project manager Jens Vallentin Hansen. "Then we rinse them and give them a coating to prolong their life. Finally, they are painted black and hardened and are ready for the customer."



Castings go through several baths of aggressive media during their surface treatment in the "paint shop" at BIRN.



A Grundfos unit provides real-time operating data on the pump and motor – both on the box by the pump and also in BIRN's central SCADA system.

For the paint shop's pumping equipment, Jens Vallentin Hansen says BIRN was looking for one supplier who could provide all the different pumps needed on-site. The equipment needed to be dependable and tough in the usual ways – but should also be able to do more.

"The pumps must run constantly – 24/7 – so there's a stable circulation in the vats," he says. "It's important that the castings get completely washed in the liquids."

He adds that they needed stainless steel pumps for aggressive media, leak-free, magnetic drive paint pumps, as well as flexible and accurate dosing pumps.

Jens Vallentin Hansen oversaw the design and construction of the new CED facility at BIRN. He wanted the plant to have more transparency and control over its pumping systems' operation and data.

"We know that careful monitoring gives a better uptime," he says.

Topic:	Industrial CED/Powder coating and surface treatment
Location:	Holstebro, Denmark
Company:	Vald. BIRN A/S foundry

THE SOLUTION

BIRN chose Grundfos for its full line of pumps in the surface treatment facility. "The advantage of choosing Grundfos, is that we get one solution from one supplier who meets all our needs. Moreover, Grundfos has things in the pipeline that I find fantastic."

He points to a Grundfos Condition Monitoring unit connected to a pump on the wash and paint line. BIRN has been one of the first companies to use the unit.



Grundfos CRE pumps and a Condition Monitoring unit work at the painting vat in the BIRN CED coating and surface treatment facility.

“This sensor can continuously provide information on not only how the motor is doing. Now we get operating data on how well the pump is doing, and under what conditions it’s running,” he says.

He points to another sensor unit on the wash line, part of the Grundfos BACMON real-time bacteria monitoring system. It takes continuous samples of liquids in the vats. “With this we can monitor bacteria, so we can take action much quicker than when we used analog monitoring. We follow our production more closely,” he says.

“Solutions like these can improve the uptime of our equipment, and a better supply capability – and ultimately, a better quality.”

THE OUTCOME

What has proven valuable to Jens Vallentin Hansen’s team is the connectivity of the products to BIRN’s central monitoring system.

Continent:	Europe
Country:	Denmark
Market areas:	Industry
Industry:	Metal and equipment manufacturers
Applications:	Automotive Industry - Painting systems Automotive industry - Surface Cleaning
Products:	CR CRE CIM/CIU DDA BACMON DynaFilter



BIRN's CED plant system programmers Pooja Rawat and Søren Hedegaard monitor the pump systems on their SCADA system.

"All information is fed into our SCADA system, so we have an overview of how motors and pumps and dosing pumps are working, and what the bacteria level is. It's important that all information is centralised. Then we can see how our production is doing from one place," he says. "That also means we can document to customers exactly what we supply."

He adds that many of Grundfos's new and upcoming products combine connectivity with one, central point of access. "That's where you create value."

He says the Grundfos system has helped to bring data transparency everywhere in the company. "So I don't have sleepless nights."

GRUNDFOS SUPPLIED:

For the paint, chemicals and other liquids at BIRN's CED surface treatment facility, Grundfos has provided a full line of intelligent pumps, monitoring equipment and digital services as part of Grundfos iSOLUTIONS.

[Read more here.](#)

"With the Grundfos data connectivity, we have transparency everywhere in the company. So I don't have sleepless nights."

— Jens Vallentin Hansen, project manager, Vald. BIRN A/S

[See video](#)