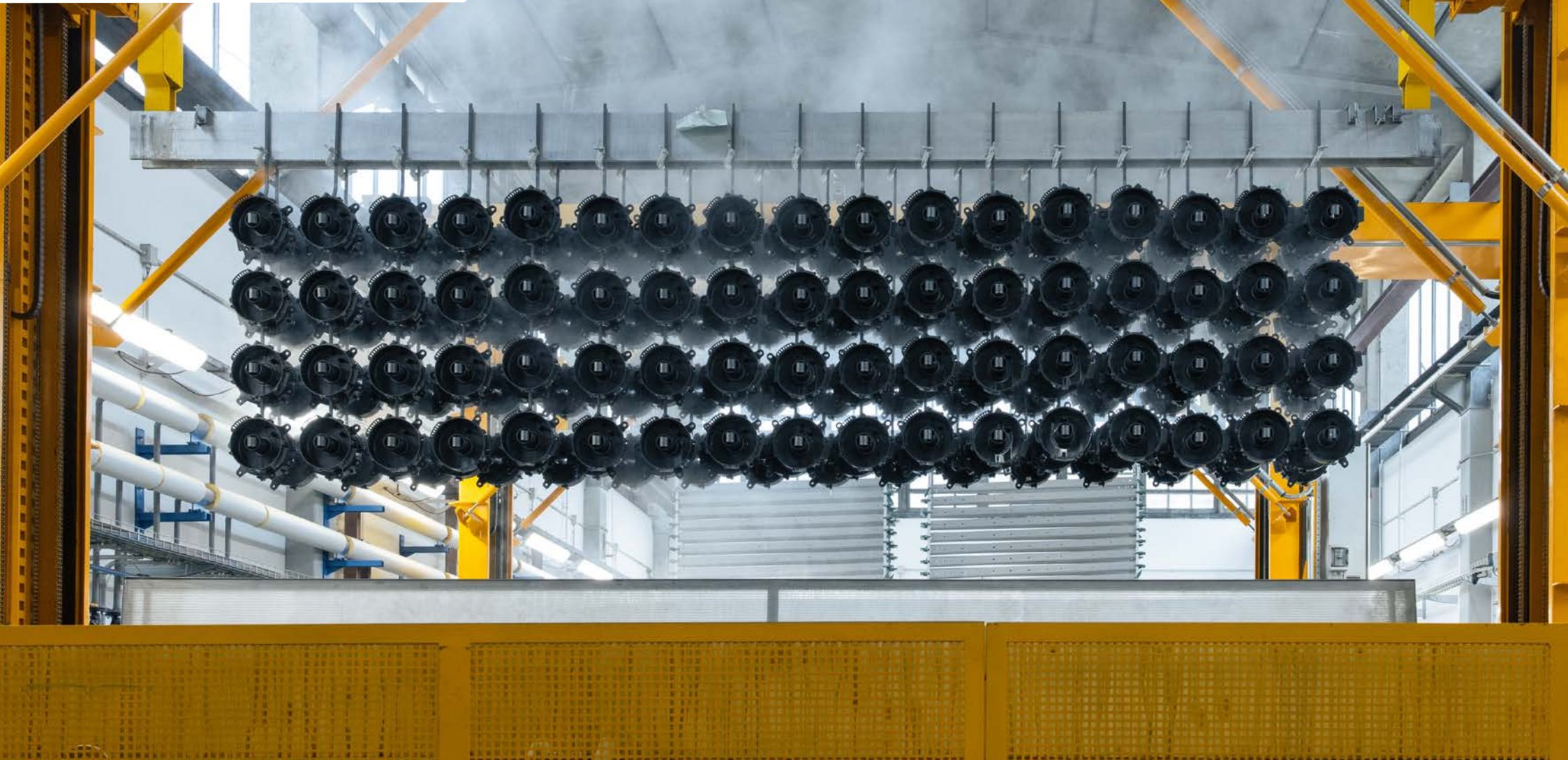




GASER

Digitalisation supports
anodising trade



Digitalised surface finishing

How GASER and ifm are optimising the anodising process together

The GASER Group specialises in the surface treatment of metals. In order to meet the growing demands of, in particular, the automotive and aviation market for traceability and process monitoring, the company is deploying a digitalisation strategy in cooperation with automation specialist ifm.

Whether screws, furniture frames, brake discs or aircraft engine components: metal components requiring particular durability or aesthetic properties undergo galvanic surface treatment. Common processes include anodising, nickel-plating, galvanising, heat treating and spray painting. The aim is to maximise corrosion protection, resistance and the appearance of the treated parts.

The GASER Group, with nine sites in Italy and one in India, has been providing these and other surface finishing processes to its customers since 1950. In order to ensure it is fit for the future, the Group has decided to digitalise all of its processes.

Heterogenous technology

“The digitalisation is fundamental for ensuring the traceability and monitoring of our processes”, explains Enrico Galliani, General Manager at GASER. “Our company has a long tradition, but has grown again considerably in the past 15 years. This means that our technology is very heterogenous. With this systematic digitalisation, we hope to standardise the digital level across the entire group so that we will be able to provide our customers with consistent information on our quality certificates.”

Individual solution for every system

GASER chose automation specialist ifm to implement this digitalisation strategy.

“We have been impressed with the cooperation for several reasons. Firstly, the experts at ifm have adapted perfectly to our needs by meeting us at our particular industrial reality. This shouldn’t be taken for granted, as our industry can most certainly be considered a niche sector”, says Galliani.



GASER will continue to rely upon the experience of its staff in future. The digitalisation is intended to help them in their work.

Examples of transformation and surface deposits. From unfinished to an aesthetic, technical artefact: GASER offers many coating options.



“Secondly, ifm has demonstrated a high level of flexibility. Instead of offering a generic solution for all our requirements, we have been able to target each individual system and each individual site together and develop bespoke solutions for the upgrade we wanted.”

From skills to data-based decision-making

But for GASER, it was not just about process transparency for customers, as Innovation Manager **Graziella Galati** explains: “Of course we would like to reflect the growth of the group by creating a sound database that provides an objective picture of where the company is at and that serves as a basis for decision-making. But the digitalisation process also helps our staff in their daily work. The skills and experience of our staff are very important for GASER.”

Step by step towards the goal

In spite of initial challenges due to the complexity of the project, **Galati** is positive about the outcome: “Our cooperation with ifm has allowed us to grow internally, expand our capabilities, and thus reinforce and consolidate our position overall. The results have borne this out and show that we’re on the right track.”

The GASER Group is just as optimistic about tackling the other goals together with ifm: “We wish to identify challenging but realistic goals together that suit our competences. ifm will gradually open the door to more complex projects, for example using predictive approaches and AI.”

Sensor data for quality and traceability

The projects primarily involve sensors for temperature, pH-value and current, as **Antonio Rendina**, Automation and Digitalization Manager, explains: “These parameters are crucial for understanding whether a treatment has been successful. In this way we can monitor the process and identify any anomalies for quality assurance.”

Old and new sensors combined

GASER had to overcome two challenges along the way to digitalisation: older systems also had to be made fit for the digitalisation. “Together with ifm, we have managed to integrate smart sensors with IO-Link technology into outdated production lines”, says **Rendina**.

While most of ifm’s sensors feature IO-Link technology, which enables seamless, straightforward data transfer to the IT level

without compromising communication with the PLC, older analogue sensors also had to be included in the digital data collection as part of the digitalisation of GASER’s systems. ifm has just the solution for this challenge in the form of converters that convert the analogue signals into digital information.

IT-based process optimisation

The second challenge was to make the data obtained available to the staff in production. It was agreed to use moneo, ifm’s IIoT platform.

moneo is a user-friendly, very powerful ifm software that allows its customers to easily review and optimise process sequences. moneo enables them to keep an eye on fill levels, temperature trends and the maintenance requirements of systems. Unexpected downtimes caused by a failure to replenish or system malfunctions can be avoided, as can quality losses caused by process deviations.

Easier controls, faster response

GASER uses the software to collate the relevant process data in easy-to-read dashboards, which can be provided on the system monitors.



The moneo dashboard with the main process data is highly visible in the workshop. The response time is much shorter when intervention is needed.

“Thanks to the rollout of the new software, things such as checking the temperature of the basins are much easier for me now”, confirms **Matteo Margiotta**, plant technician at GASER. “I can see immediately on the dashboard whether the values are within the target range. If there is a risk of quality problems, the display changes colour. Therefore, I know exactly when a problem is looming and I can act quickly. For example, we used to just take the temperature manually with a thermometer. It took a lot of experience to keep the processes within the ideal range.”

From production line to management level

As well as production, the management also benefits from the transparency. Thanks to moneo, those in charge can monitor all the systems and sites centrally. By integrating the sensor data into the GASER Core ERP system, production and company data can be combined and used for strategic analyses. “ifm was hugely supportive in helping us to develop all of these ideas”, says **Antonio Rendina**. “Besides training and skills development, there are still almost daily discussions to explore new approaches and overcome obstacles together. Thus their claim to be ‘close to you’ is spot on in my eyes.”

Conclusion

ifm is supporting the GASER Group on the path to digitalisation with comprehensive, flexible solutions. GASER itself is already reaping the reward from this step – with optimised processes, greater quality assurance and an efficient, networked shop floor.



Temperature probe, evaluation unit and cables withstand the harsh environmental conditions of the anodisation process.

” *Together with ifm we have managed to integrate smart sensors with IO-Link technology into outdated production lines.*