Press release

**Dürr expands first market-ready AI application for paint shops**

**Artificial intelligence for existing robots and sealing**

**Bietigheim-Bissingen, 2 August 2021** – Identifying defect sources, determining the optimal maintenance schedule, improving manufacturing processes: until now, artificial intelligence only made this possible in a paint shop equipped with state-of-the-art robots. Now, however, Dürr is significantly expanding the scope of its AI applications with the enablement of analysis software from the DXQ product family for sealing. In addition, a unique interface solution makes it possible to incorporate robots from existing paint shops for the first time.

Factories in the automotive industry have enormous amounts of latent data about manufacturing processes, raw materials and products. The key to leveraging this asset is connectivity – in other words having the right interface at the control level to get at the information provided by robots, ovens, cathodic electrocoating systems or conveyor technology in the first place.

Increasing application quality and plant availability using modern IT technologies involves recording relevant machine data, such as axis positions and temperatures or events like alarms and the start and end times of programs, in real-time and uploading them to a database. “Without this basic prerequisite, software from our DXQ family cannot determine the current state of plant components. The goal is then to combine this with historical data and machine learning to detect previously unknown defect sources or to precisely plan maintenance intervals,” explains Jens Häcker, Vice President Control Systems at Dürr.

**Connectivity for existing plants**

Although the demand for digital applications is high, operators in existing plants are constrained because most of their systems do not have connectivity and the right interface for data acquisition is found only in the later generation of Dürr robots. Previously, earlier models, robots from other manufacturers and technology outside of paint application could not be connected. But Dürr found a way to bring connectivity to almost all common robots and disciplines.

**Detailed information from all process steps**

The solution is an adapter made up of hardware and software components that can connect to all current fieldbus technologies and that provides data in the necessary high temporal resolution of a few milliseconds. The adapter is offered by Dürr in cooperation with Techno-Step, a specialist in systems for process data analytics and diagnostics that has been part of the Dürr Group since 2020. “Operators are thus able to read the available sensor and actuator data from their existing plants and to integrate the entire spectrum of disciplines, from pretreatment to application to conveyor technology, into one piece of analytical software. With **DXQ**equipment.analytics they get detailed insight into the various process steps and all the systems involved in them along the entire value chain,” says Jens Häcker.

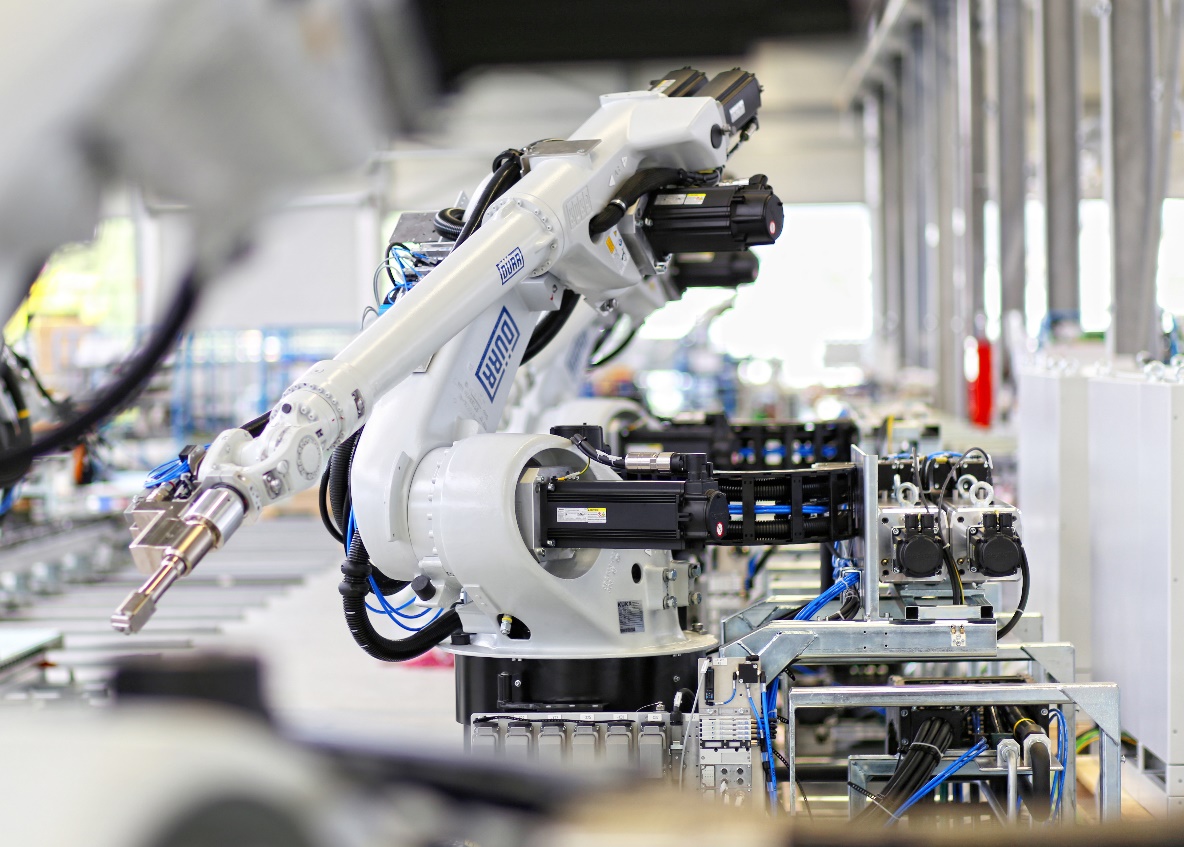
**Expertise in mechanical engineering and IT**

The **DXQ**equipment.analytics software package includes the Advanced Analytics module. It is the first market-ready solution to date to use artificial intelligence (AI) to increase overall equipment effectiveness in the paint shop. Dürr has expanded this module for sealing by adapting the AI models that analyze the robot and process data for this discipline’s specific requirements. To meet this challenge, Dürr utilized their comprehensive expertise in production technology and manufacturing processes in the automotive industry and a high level of digital knowledge. This combined expertise will make it possible to use AI in the future to precisely detect defect sources at an early stage when applying high-viscosity materials and to determine optimal maintenance schedules. One example is the detection of nozzle clogs. The sealing material partially clogs the application nozzle, changing the material jet and leading to quality defects that require rework to fix. Unlike conventional control technology, the DXQ software detects this defect and enables earlier intervention.

**Pictures**



**Picture 1:** Using artificial intelligence, Advanced Analytics detects defect sources at an early stage during the application of paint and now also high-viscosity materials.



**Picture 2:** Advanced Analytics from Dürr’s DXQ software family is the first market-ready AI application for paint shops and is now also available for sealing.

**About Dürr**

The Dürr Group is one of the world's leading mechanical and plant engineering firms with extensive expertise in automation and digitalization/Industry 4.0. Its products, systems and services enable highly efficient and resource-saving manufacturing processes in different industries. The Dürr Group supplies sectors like the automotive industry, mechanical engineering, chemical, pharmaceutical, medical technology and woodworking industries. It generated sales of € 3.32 billion in 2020. The company has 17,000 employees and 121 business locations in 33 countries. Since February 2021, the majority-owned automation specialist Teamtechnik has also been part of the Group. The Dürr Group operates in the market with the brands Dürr, Schenck and HOMAG and with five divisions:

* **Paint and Final Assembly Systems:** paint shops as well as final assembly, testing and filling technology for the automotive industry, assembly and test systems for medical devices
* **Application Technology:** robot technologies for the automated application of paint, sealants and adhesives
* **Clean Technology Systems:** air pollution control, noise abatement systems and coating systems for battery electrodes
* **Measuring and Process Systems:** balancing equipment and diagnostic technology
* **Woodworking Machinery and Systems:** machinery and equipment for the woodworking industry

Contact

Dürr Systems AG

Kristin Roth

Marketing

Phone: +49 7142 78-4854

E-Mail: kristin.roth@durr.com

[www.durr.com](http://www.durr.com)