Press release

Compact painting robot for industry

WB Coatings using Dürr robot to develop innovative paints

Bietigheim-Bissingen, 25 February 2020 – During the development of new special paints, WB Coatings reached its limits when it came to the usual manual application. That’s when the global paint and coating manufacturer came up with what seemed a rather unconventional idea for its industry: to add a compact painting robot from Dürr to its lab. This enables fully reproducible coating layer thicknesses in the µ range that are absolutely essential in the development of chrome-effect paint systems, for example.

The pre-installed, ready-to-paint robot from Dürr is a professional solution for automated paint application. With coordinated and tested components, it is tailored to the requirements of the general industry – a combination that makes it unique on the market. WB Coatings is the first paint manufacturer to use the “ready2spray” robot in the development of its new products.

WB Coatings has been known for its innovations for more than 135 years. Not only did it invent hammertone paint, but also many other special coatings. To this day, it is intensively engaged in research and development. The in-house lab continuously optimizes the recipes for the traditional industrial paint sector, while the innovation center focuses on new developments for various sectors.

One new product is a chrome-effect paint that can be used, amongst others, for vehicle interiors. It gives components made from plastic, such as window lift switches or decorative trims on the steering wheel, a deceptively realistic chrome look. WB Coatings achieves this effect using paint systems consisting of one, two or three coating layers. “Without using a robot, we would not have been able to develop these new paint systems as a chrome-free alternative for shiny, silver-colored surfaces. The challenge is to apply the coating layers of the chrome-effect paint very evenly. And the three-layer paint system in particular needs very thin, reproducible coating layers of 2 to 3 µm. This is something even highly experienced hand painters can’t achieve,” explains Andreas Ohletz, Head of Sales for Innovations at WB Coatings.

To meet this requirement, WB Coatings opted for an automated painting solution from Dürr. It consists of the compact six-axis robot **Eco**RP 10 R1100 with state-of-the-art application technology including mixing and dosing technology for two-component paints (2C), paint supply systems, and controller.

**Industrial series production modeled in the lab**

The robot system’s automated spray program eliminates any deviations, and thus delivers maximum reproducibility. This starts with dosing the components in the exact same ratio every time. Mixing the tiny quantities of just a few milligrams by hand poses too great a risk of inaccuracies. The painting result is also influenced by the application speed and the distance from the object to be painted. These factors inevitably vary with manual application, while the robot works completely uniformly and as a result also produces identical coating layer thicknesses. “A major benefit for us is the in-house tests that we can now conduct in our technical center with various base coats to test recipes. The robot lets us model automated industrial production and develop new paint systems that can make production more profitable for our customers involved in series production,” says Sebastian Grahammer, Head of Development in WB Coatings’ innovation center.

**Robot for complex 3D geometries**

Normally only sample panels and speed shapes are painted in the paint manufacturers’ labs. The flat spray system WB Coatings originally had in mind would have been sufficient for this. However, Sebastian Grahammer is convinced that the decision to opt for the six-axis robot will give the paint manufacturer the flexibility to respond to customer requirements in the future: “The robot lets us paint 3D objects with complex geometries. With a 2D spray system, we would have limited ourselves in what we could develop.”

**Ready to spray in no time**

Since the application technology is already pre-installed, the Dürr robot system at WB Coatings was set up, installed and ready to paint within just a day and a half. Its compact dimensions enabled it to be integrated into the existing painting booth despite the space constraints. When the robot is in the parked position, painting by hand is still possible in front of the same extraction wall.

“The painting robot is part of our ready2integrate concept. The concept centers on technologically sophisticated and tested application solutions that are easy to integrate into individually designed plants. Dürr collaborates with selected system partners here, since they enjoy extremely close proximity to their customers, are familiar with their requirements, and can act with an extremely high level of flexibility,” explains Holger Beiersdorfer, Vice President Industrial Products at Dürr.

Dürr will be showcasing its ready2spray technologies for automated painting at PaintExpo (stand 3320, hall 3). The painting robot **Eco**RP 10 R1100 will be presented at the booths of the Dürr partners Eurotherm (hall 2, booth 2539), L&S Oberflächentechnik (hall 1, booth 1238) and SIDASA Engineering (hall 1, booth 2540).

**Pictures:**

You can download the following image material [here](http://www.durr.com/fileadmin/durr.com/06_Media/01_News/2020/Files/duerr-customer-project-wbcoatings-en.zip).



**Picture 1:** WB Coatings is now using the compact ready2spray robot from Dürr to test its new paints.



**Picture 2:** The six-axis compact robot **Eco**RP 10 R1100 is equipped with application technology and can be used to paint 3D objects with complex geometries.



**Picture 3:** A wide range of application technology can be installed on the robot, for example the automatic spray gun **Eco**Gun AS AUTO.

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* **Paint and Final Assembly Systems:** paint shops as well as final assembly, testing and filling technology for the automotive industry
* **Application Technology:** robot technologies for the automated application of paint, sealants and adhesives
* **Clean Technology Systems:** air pollution control, noise abatement systems and battery coating lines
* **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

Tel.: +49 7142 78-4854

E-mail: kristin.roth@durr.com

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