



When the Application System's Revamp Makes the Difference

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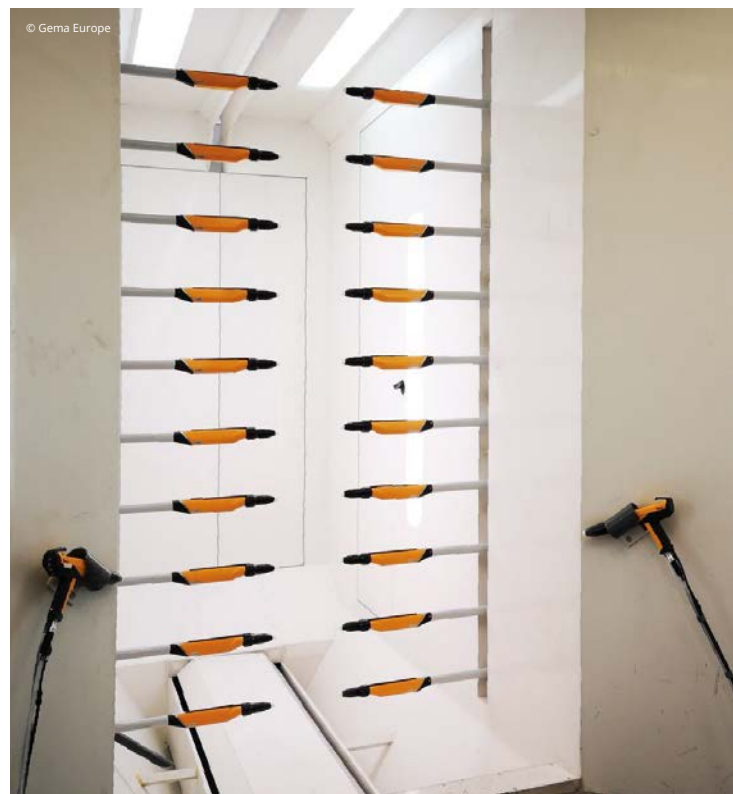
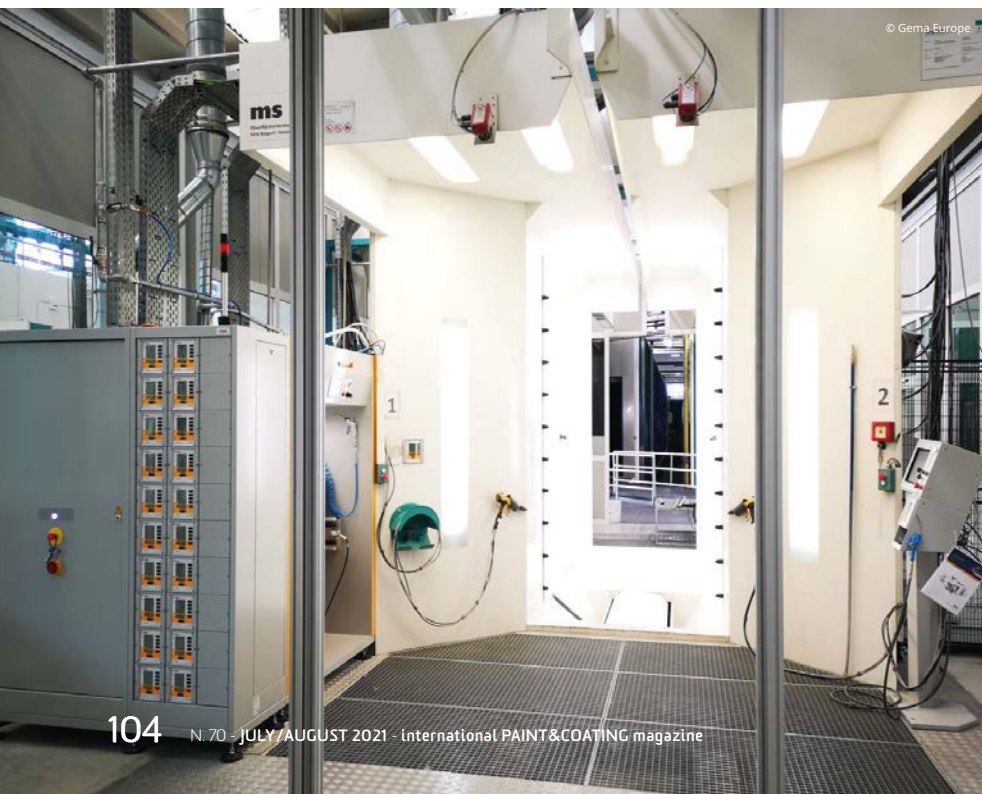
Being a coating contractor means making up for any delays in the links that precede this delicate stage in the production chain. Specialising in contract powder coating for almost forty years, VRB chose to make the updating of its production equipment its main trump card, aiming to achieve maximum flexibility and delivery speed. This is why it relied on Gema Europe's experience and Euroimpianti's expertise to set itself apart from its competitors.

One of the primary goals of any subcontractor is to replace its customers in one or more supply chain stages that they are not equipped to deal with on their own. This is also and especially true for coating. As it is one of the last links in the production chain, in doing so contractors also have to cope with any delays accumulated in previous stages. This is why rapid execution of orders and delivery of painted products, always combined with efficiency and high quality levels, have become strategic to maximise customer satisfaction. "We can never stop, and updating our devices is a must in such a competitive field as ours," states Nicola Zorzan, the Managing Director of VRB Srl, a firm specialising in contract powder coating of parts intended for the most varied industries, from HVACR to curtain walls, rail industry, and furniture.

Over the last three years, this company based in Verona (Italy) with almost forty years' experience in powder coating has upgraded its two coating lines with new powder application and process management equipment. For this project, it relied on multinational company Gema Europe's devices and on a new coating plant supplied by Euroimpianti (Valeggio sul Mincio, Verona).

"Our factory is equipped with an high production capacity line; its two booths were revamped with Gema Europe's powder feeding and spraying equipment, respectively for light and dark colours. The second one is a semi-automatic line designed by Euroimpianti in 2019 for powder coating workpieces up to 8 m in length, in which an automatic unit of 10 guns with Gema's Venturi technology has also been installed."

**The application system updated by Gema Europe in 2020.
The revamp of the powder application booth included the introduction of 20 automatic and 4 manual guns.**





In the foreground, the MagicControl 4.0 system with its innovative interface.

The revamp of the coating booths with Gema technology

The application system of the main plant's booths was updated in 2018. "We installed OptiGun GA03 guns, OptiSpray pumps, and an OptiCenter OC03 powder management unit," indicates Gema Europe Managing Director, Mario Ferro. "We also integrated the already-installed components with a MagicControl CM30, a device guaranteeing simple but effective control of the entire application process, reducing waste and optimising powder consumption. In 2020, we further revamped this system with Gema's SIT - Smart Inline Technology. Thanks to accurate planning, in little more than ten days the automatic booth was completely reconditioned and the old equipment was replaced by a new powder centre and a state-of-the-art application unit featuring 20 automatic and 4 manual guns, 2 horizontal-axis reciprocators, and a dimensional recognition system. The entire plant, including booth automation, is managed by the control system MagicControl 4.0."

"We performed this second revamping operation," notes Zorzan, "based on the positive results achieved since Gema had upgraded our application equipment two years earlier. Afterwards, our collaboration with the Gema team had become much closer and their expertise and support has been such that my staff have found no difficulty in adapting to the new way of working resulting from this new technology."



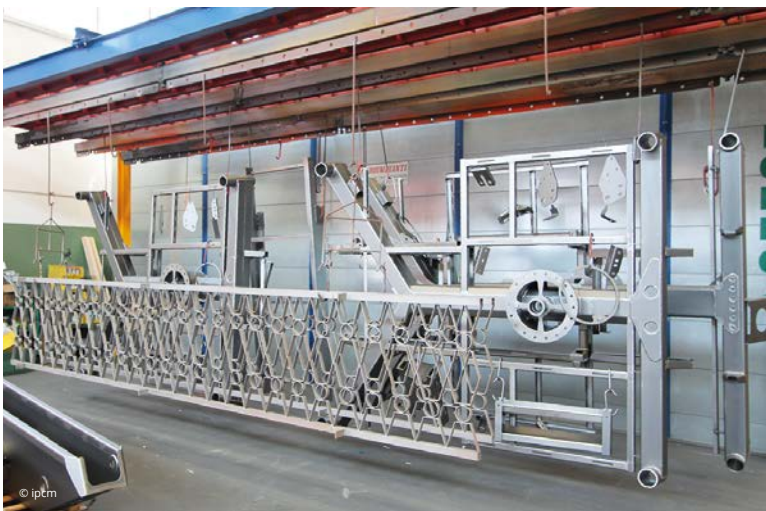
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The coating plant: a guarantee of efficiency

The coating plant built by Euroimpianti is able to treat products with maximum dimensions of 8 x 1.5 x 2 m. The line consists of a spray pre-treatment tunnel, a drying booth at 120 °C, an automatic coating booth with a powder management unit, and a curing oven with forced hot air circulation at 200 °C. "The 32 m-long pre-treatment tunnel," explains Euroimpianti Srl General Manager, Gianluca Baruffaldi, "includes phases of phosphodegreasing, cleaning, rinsing with demineralised water, and passivation with the Nebula system. Thanks to its integrated control and dosing instrumentation, this device allows customising the use of the nanotechnology product, avoiding waste and ensuring that the part to be treated is sprayed with a solution that constantly maintains the chemical qualities of the product itself. The side walls of the chamber are made of modular panels and constructed using a special manufacturing process that guarantees perfect sealing against sprays and vapours."

After drying, the parts are taken to the powder coating booth by the two-rail conveyor, designed and installed by Euroimpianti with 22 workpiece-holding bars capable of supporting a maximum weight of 1000 kg each. "The booth consists of an external metal structure with a multi-layered dielectric sandwich lining, which prevents any electrostatic deposit of charged powder on the internal walls while guaranteeing the dissipation of electrical charges to the outside. This occurs slowly and evenly over the entire surface of the booth to avoid the electric repulsion effect, which is harmful to the coating process." The Gema Europe team also upgraded this plant's application equipment, by installing an automatic unit consisting of 10 guns with Venturi technology controlled by a MagicControl CM 30 control system.

Conclusions

"We have improved the quality of our surface coatings," says Zorzan, "thanks to the new generation of Gema technology implemented and its perfect integration with our already-existing systems, as in the case of the Euroimpianti line. Moreover, we now have the ability to coat multiple batches of products in varying sizes with numerous colour changes and no powder wastage, all of which gives us the flexibility and speed of delivery that are increasingly essential to succeed on the market." ○

From top to bottom:

- A detail of Euroimpianti's coating line with the two-rail conveyor and the drying oven (right).
- VRB powder coats products up to 8 metres in length.
- The application booth of the line installed by Euroimpianti.