

PRESS RELEASE

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New possibilities in furniture production: powder coating for MDF plates

Breakthrough for powder

WAGNER is setting standards world-wide with the development of a groundbreaking technology for powder-coating standard MDF plates. This innovative process is an eco-friendly alternative to traditional wet coating, laminating or film coating which offers numerous advantages: huge cost and energy savings, seamless all-round coating, sustainability and the possibility of immediate further processing. A pilot application at a furniture manufacturer's is exceeding all expectations.

“Nowadays powder coating is one of the most eco-friendly standard technologies and is already well established.” This assessment is true of metallic objects, but organic materials such as wood have always been quite a different story - up to now. Powder-coating of MDF is a complex process with its own peculiar rules.

The challenges involved are summed up by Peter Schwarz, powder specialist at Wagner in Altstätten: “Medium-density fibre boards have a variable moisture distribution, a low electrical conductivity and an inhomogeneous edge and surface density. Up to now, these factors have stood in the way of a reliable powder application process. With our cutting-edge technology and newly developed low-temperature powders, primers and top coats, we have now finally achieved a breakthrough in MDF powder coating.”

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Significant economic and ecological advantages

The development of the process was a costly and time-consuming task, which WAGNER achieved in close cooperation with its partners. This research group benefited from the valuable know-how of MDF coaters, powder manufacturers, furniture makers and MDF plate manufacturers from Switzerland, Austria and Germany.

As part of the project, the development team at WAGNER's Swiss plant in Altstätten came up with special units capable of achieving flawless electrostatic powder coating of standard MDF plates through an innovative new charge distribution.

A further milestone was the development of new low-temperature powders by the manufacturers. These not only ensure process reliability, but also significant cost savings. The use of special modern gas catalytic radiation furnaces saves a huge amount of energy. Key to all these innovations is of course the perfection of each stage of the process. Precise coordination of all coating parameters is critical. Only then can process reliability be guaranteed when carrying out industrial-scale powder coating of standard MDF plates.

“Our new coating technology has amazing advantages for large-scale production: the cost saving is approx. 25 per cent, the material saving around 20 per cent, and the reduction of CO2 emissions 3.8 kilograms per square meter - an impressive testimony to the sustainability and efficiency of the process.” No wonder, then, that WAGNER's new process scooped the coveted “DIE OBERFLÄCHE 2013” gold award for surface finishing technology.

The new technology in practice

A renowned furniture maker who carries out large and small-scale coating of standard MDF plates was so impressed with WAGNER's invention they invested in two brand new powder coating lines. The new process really comes into its own when it comes to industrial-scale coating of MDF plates with more complex

shapes, as used in the furniture industry. At the same time, flexibility is retained as the solution is fully adapted to the internal workflow.



MDF powder coating is suitable even for more complex shapes.

The furniture company's head of production sums up their investment as follows: “Both coating lines have been in operation since January 2013. They have more than met our high expectations. The line is a resounding success, both from an economic and environmental point of view. Our customers are delighted with the improved surface finish of the coating, which is now even more homogeneous and scratch-resistant than before.”

Background information:

Award for pioneering powder technology



J. Wagner GmbH's groundbreaking technology for powder coating standard MDF plates won it the coveted “DIE OBERFLÄCHE 2013” gold award. The award is presented annually for the most innovative application or technology within all disciplines of surface engineering. In his eulogy, jury member Dr. Martin Riester (VDMA trade association for surface technology) explained the jury's unanimous decision as follows: “Of all the submitted applications, this technology stood out as the best in terms of the criteria which candidates were asked to demonstrate: energy efficiency, sustainability, innovation, competitiveness and industrial application. The solution presented to us is a true breakthrough.”

About WAGNER:

WAGNER is a leading manufacturer of high-tech components and systems for the surface application of wet and powder coatings as well as paints and other liquid media. WAGNER surface finishing systems are used both in the industrial sector and by craftsmen and DIY enthusiasts.

WAGNER boasts a full range of products and technology, from material feeders through mixing, dosing, movement and control systems including material logistics to the surface application of the various media. Completing the product portfolio are booth and recovery systems for powder coating as well as gluing and marking systems.

The WAGNER Group has a global presence, with a workforce of approx. 1,450 people, 19 operative companies and around 300 WAGNER agencies worldwide. The WAGNER Group is owned by the Josef-WAGNER Foundations which, in addition to supporting the group of companies, pursue exclusively non-profit, charitable aims.

For more information, visit www.wagner-group.com