J. Wagner GmbH
a Member of WAGNER

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Reference case
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How a manufacturer of agricultural machinery achieved a 90% degree of automation in the coating of front loaders

The French company has been making farmers' daily work easier for many decades. For example with innovative and reliable front loaders for tractors.

Until 2022, the swing arms and buckets of the front loaders were primed by dip coating. The geometrically complex parts were then powder-coated manually and cured in an oven. This production process was accompanied by fundamental disadvantages. Depending on the daily form and experience of the employees, the high proportion of manual work could lead to fluctuating results in the coating quality and noticeably slow down the production speed. A high proportion of manual work also means that the company is heavily dependent on qualified and experienced personnel. Furthermore, dip coating releases volatile organic compounds (VOCs). These can be harmful to health and the environment.

The manufacturer was aware of these disadvantages. In order to increase its competitiveness and continue to occupy a leading position in the market, the company decided to take action. The following requirements were set in stone:

- A degree of automation of 85% to achieve the ROI target
- Part coating without the use of VOCs
- Reduction of rework
- Increase in production capacity
- More efficient use of coating materials

The company benefits from high-end coating solutions from southern Germany
The decision in favor of the WAGNER solution was made for the following reasons:

- Convincing laboratory tests with innovative solutions that could not be presented in this way by the competition
- A degree of automation of 90% exceeds the requirements for the ROI target
- Strong reference projects in the agricultural and construction machinery sector

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The coating system planned and implemented by WAGNER led to an immense increase in efficiency in production. Instead of the dip bath and manual powder coating, the company is now able to carry out both work steps using automatic powder coating.

Thanks to 3D coating, the company is able to scan the geometrically complex parts as they enter the coating booth. This allows the powder guns to be controlled in such a way that they automatically adapt to the complex part geometry. This results in high surface coverage with minimal powder consumption and optimized system utilization. S-Cube booths were installed for both work steps - priming and coating - as they enable maximum automation and are ideally designed for particularly large and complex workpieces.

The SuperCenter EVO powder center ensures highly automated and fast color changes with a high degree of automation. Thanks to the latest generation of powder centers, the company is able to record and continuously optimize a wide range of production data (such as powder consumption).

The results speak for themselves

This is what the new WAGNER coating system means for the company:

- A degree of automation of 90%, so that the ROI target was exceeded
- An 80% reduction in the amount of manual work
- An increase in production capacity of over 40%
- A primer without VOCs that are harmful to health and the environment
- Significant increase in efficiency in the consumption of coating materials

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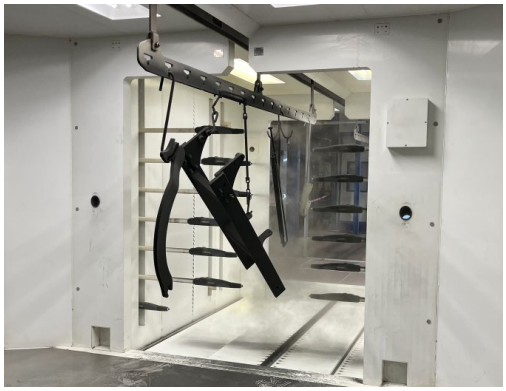
Pictures:

Components for agricultural machinery during the coating process



3D powder coating of workpieces in the S-Cube color booth

SuperCenter EVO for fast color changes with a high degree of automation