

Preview JOT Issue 04.2020

PAINTEXPO 2020

Great PaintExpo preliminary report

The April issue of JOT is all about the upcoming PaintExpo. In a large preliminary report on the trade fair, JOT provides comprehensive information about the exhibitors' innovations and interesting topics. Together with the list of exhibitors and hall plan, the trade fair preview is an ideal tool for visitors to prepare their tour of the fair.

WET PAINTING

Beautiful views with UV

Energy-saving UV LEDs are now also suitable for curing coatings on three-dimensional parts. The process is used in the cosmetics industry, for example, when a higher quality appearance of a product is desired. The article describes, for example, the coating and lacquering of lipstick tubes made of ABS.

COATINGS

Paint on the ball - New paints for railway interiors

More and more surfaces in the interior of rail vehicles are being coated with paints - at the same time, the demands on the paint systems used are increasing rapidly. Production and processing are becoming increasingly complex - absolute cost efficiency is required. The article shows new solution concepts.

DATES

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POWDER COATING

In-Mould Coating with powder

PIMC stands for powder coating on already heated tools. In this process, fibre composite plastics are bonded with powder coating in a single-stage pressing process. The finished component can be demoulded directly from the mould with a primer layer or top coat. The advantages: Weight and cost reduction, fully automated process with high layer thickness accuracy, no volatile organic compounds.

PRETREATMENT

Chromium-free pretreatment with high corrosion protection

Stricter environmental laws and an increasing metal mix are increasingly pushing traditional phosphating processes to their limits. With a new environmentally friendly thin-film technology, pretreatment can be individually adapted to the substrate and coating. Used in contract coating, the pretreatment method ensures chromium-free production and high corrosion protection.

STRIPPING

The challenge of paint stripping

When returning incorrectly coated parts to the production process, quality assurance of the paint stripping process plays an important role. The stripped parts should meet similar quality requirements as new parts in order not to contribute to coating defects again. The article describes problem cases and solution approaches from practice.

INDUSTRIE 4.0

Fast error detection and data for industry 4.0

At present, quality control in spray painting processes is still carried out visually, which means a great deal of manual and time-consuming work. A novel and automated control system monitors the coating inline and in real time using lasers, high-precision optics and artificial intelligence (AI) - an alternative that is faster, permanently accurate and in the long term more cost-effective.

ACCESSORIES

Antistatic gun against dust

Presentation of a new type of ionizer that neutralizes static charge and thus drastically reduces the problems in the painting process caused by dust inclusions. The unit, which is powered by compressed air, is easy to handle and ensures smooth operation in the painting cabin.

Contact



Ingo Rosenstock

Sales Management

+49 (0) 611.7878 146

ingo.rosenstock(at)springernature.com

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PRODUCTION TECHNOLOGY

Power+Free system optimizes the surface coating

Clever time planning and committed project management ensured that the outdated semi-automatic conveyor system of an Austrian contract coater was replaced by a flexible Power+Free conveyor system parallel to the ongoing production process. The newly equipped modern powder coating plant transports metal profiles and other components for window production up to seven metres long - efficiently and environmentally friendly.

MEASURE + TESTING

Objective cross section evaluation

The evaluation of cross cutting tests is still user-dependent. It is influenced by the human eye or the abstract assignment / conversion into numerical values by visual comparison with sample images. A new system is intended to remedy this: By evaluating the contrast ratio between coating and substrate, it quickly and repeatedly determines the percentage of the loss area, which is the basis for the cross-cut characteristic value.

PARTS CLEANING

Detecting contamination and removing it smartly

In order to efficiently remove impurities on components, knowledge of their existence, origin and composition is essential. A research project dealt with the use of bidirectional display technology and combined it with easy-to-clean surfaces to quickly detect and remove impurities and contamination. Within the scope of the research work, different layer combinations were investigated.