Preview JOT - Measuring and Testing in Surface Technology 2022

NEW TECHNOLOGIES

Digital twin simulates coating thicknesses
Uniform coating thicknesses are an important quality factor in industrial car painting. Until now, numerous test runs have been necessary when introducing new models until the painting results are right. Now, coating thicknesses can be calculated virtually and real tests reduced to a minimum.

OPTICAL CONTROL

Next generation of leveling measurement
Leveling measurements are used to evaluate surface brilliance. The new generation of a gloss meter allows the display of the measurement results with the help of a structure spectrum and thus supports the analysis and optimisation of the surface quality.

LAYER THICKNESS MEASUREMENT

Measuring the thinnest layers quickly and accurately
Paint and coating thickness measurements on CFRP are carried out both in high-precision areas such as paint inspection in aviation and in industry. Microwave-based coating thickness gauges can be used in both areas. According to the supplier, these devices enable non-destructive and extremely precise measurements.

DATES

Advertising deadline: 3/25/2022
Copy deadline: 4/01/2022
Publication date: 4/25/2022

PROCESS CONTROL

Analysing spray patterns precisely - in the wet phase
Painting robots are used in many applications today. The focus is on process optimisation and quality improvement. A system for the digitalisation of painting processes and the consistent control of the spray pattern can help here.

Keeping an eye on the spray with AI
Artificial intelligence (AI) is increasingly finding its way into surface technology: in complex coating plants, the processes are partly monitored from the preliminary stage to the finished result and analysed and improved by means of AI. However, the core of the coating process - the spray - is usually left out. This is where potential lies dormant.

Highest measurement reliability over the entire life cycle
Especially in the automotive industry, regular calibration of measuring instruments is mandatory. Test process suitability according to VDA Volume 5 is now well established. As a calibration service provider, a sensor manufacturer ensures that its coating thickness gauges comply with these specifications.

ADHESION TEST

Rockwell layer adhesion test - the machine view
When evaluating the Rockwell layer adhesion test visually, the results are sometimes subjective and not accurate enough. A new method based on machine learning makes it possible to automate the evaluation.

CLEANLINESS MEASUREMENT

Particle measurement technology in the production line
Particulate contamination and defects on component surfaces are detected in production either by visual inspection or by rinsing the component and analysing the rinsing fluid. This type of quality control is time-consuming and cannot be integrated into the production process. An optical inline measuring system is now being developed as part of a research project.

Contact