

## Preview IST - International Surface Technology 03.2024

### FOCUS | PARTS CLEANING

High-purity parts cleaning - a question of requirements

The requirements for equipment, environment and cleaning media in the high-purity sector are enormous. It is important to take a look at what is meant by high purity in the industry and in the world of parts cleaning, as this varies considerably. The appropriate cleaning concept depends on this.

Dry reliably and save energy

An ageing passivation line for medical implants and instruments was replaced by a modern new system. The process steps of cleaning, passivation, rinsing and drying were analysed in terms of quality, throughput and energy savings.

### NEW TECHNOLOGIES

AI in parts cleaning is making further progress

How can parts cleaning be improved with the help of artificial intelligence? A project is investigating this question: One aim is to develop a cleaning system that can control and adapt itself. The project partners have now completed important intermediate steps.

### FUNCTIONAL COATINGS

Plasma technology as an alternative to electroplating?

If reliable conductivity and appropriate corrosion protection are required, precious metals are generally used. The use of atmospheric plasma technology is cheaper, more efficient and more environmentally friendly: it allows the surfaces of base metals to be treated selectively and precisely.

### Dates

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### WET PAINTING

Cost-saving powder booth

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### COATINGS

The curing oven remains switched off  
Polyaspartic resins have been on the market for a long time. They have a low viscosity, which enables very high solids content and even solvent-free coatings. Their high reactivity also ensures particularly fast curing. This makes them a sustainable option for users.

### ROBOT PAINTING

Automated painting of agricultural machinery engines

A pool of suppliers worked together to build the new automated engine painting system for a group of companies based in Italy. An international materials handling provider took responsibility for the paint application.

### CORROSION PROTECTION

Unclear salt limits make corrosion protection difficult

In order to protect steel from corrosion with coating systems and thus maintain the long-term functionality of structures, several requirements must be met. One issue that has not been conclusively clarified in specialist circles for years is the level of the limit values for salts on steel surfaces to be coated.

### ROBOTICS

Cleaning technology meets robotics

Before industrially manufactured components can be further processed and coated, for example, they often first have to be cleaned of oil, grease, swarf, burrs or metal flakes from the manufacturing process. In order to integrate cleaning into their own production line as efficiently as possible, many companies rely on automation and modern robot cells for parts cleaning.

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## ELECTROPLATING TECHNOLOGY

Platinum layers for applications ranging from hydrogen to connectors  
A special electrolyte for electroplating with pure platinum opens up new possibilities. According to the supplier, it enables the deposition of exceptionally thick, homogeneous and crack-free platinum layers, which should provide advantages in various technical applications in particular.

## BLASTING

Robotics in pre-treatment  
Robotics is increasingly finding its way into the surface pre-treatment of coatings by blasting. However, special robot technology is required for this abrasive application, as standard industrial robots are unable to perform this task.

## MEASURING AND TESTING

Non-destructive testing of plastic coatings  
Photothermal coating thickness measurement is a non-contact process for paints, powder coatings and glazes on a wide variety of substrates. The different thermal properties of the coating and substrate are utilised to determine the coating thickness. Three application examples show the advantages of this method.