



**viledon<sup>®</sup>**  
filterCair

**WE OPTIMIZE YOUR PROCESS!**

PROCESS ANALYSIS IN PAINT LINES

FREUDENBERG  
FILTRATION TECHNOLOGIES

 **FREUDENBERG**  
INNOVATING TOGETHER



# VILEDON FILTERCAIR: PROCESS ANALYSIS IN PAINT LINES

## DETERMINING THE CAUSES OF DIRT-IN-PAINT

### Sources for dirt effects

In the production process, elimination of paintwork defects by reworking or running the part through the process again, together with the requisite quality control routines, account for a very large proportion of the operating costs involved. The defects are frequently attributable to fibers, abraded particles, dried overspray, pollens, etc. The cleaning process, the filter systems, the personnel or the parts to be painted themselves: they are all of them possible sources for dirt penetration into the painting system.

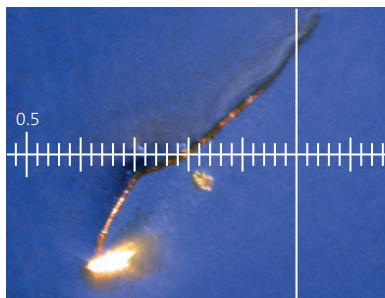
Considering the multitude of possible contamination sources, it is vital to take a holistic view of the process. Freudenberg Filtration Technologies, as a long-standing partner of the automotive industry, has taken this fact on board, and responded with the service packages offered by Viledon® filterCair. The principal focus here is on optimizing the painting process in regard to its error and reject rates, increasing system availability, and cutting the operating costs involved.

### Analysis down to the tiniest detail

Meticulously trained and highly experienced Site Technicians carry out the services listed on the right, with the aim of achieving a significant improvement in your painting process. All measurements and analyses are performed and documented using standardized procedures. Conspicuous deviations are reported immediately to the client: the result reports, including a defined action plan for improvement, are provided with responsive promptitude.

### Stringently certified quality

Quality management is massively prioritized in our company, from the first step in the development process, all the way through manufacture and delivery of the products concerned, and continuing with can-do service support. Our quality and management systems have been certified in conformity with all the regulatory specifications laid down in DIN EN ISO 9001, DIN EN ISO 14001 and OHSAS 18001. In addition Viledon® filterCair has won Ford's Quality Prize for the automotive sector, the Q1 Award.



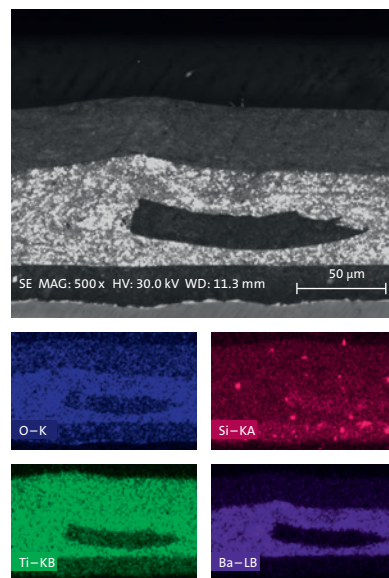
left: paint drier  
right: cotton fiber in the paint under  
a light-optical microscope







filterCair service technician monitoring process parameters



SEM and EDX analyses of dirt-in-paint at the filler layer

### What we can do for you

- **Particle measurements** by means of laser particle counters, stationary at the tripod or as a ProSim measurement running concurrently with the production process concerned. In painting lines, driers, cleanrooms, conveyor systems, ventilation systems, etc., with the aim of detecting, identifying and eliminating the causes and positions for possible dirt penetration.
- **Determining air downdraughts**, their distribution, booth balancing and ventilation balancing by means of hot-wire and rotating-vane anemometer. The goal is to optimize paint consumption, paintwork results, cleaning routines and the energy balance. In primer and topcoat lines, and in repair zones.
- **Microscopic analyses** by means of light-optical and scanning electron microscopy (SEM, EDX) plus infra-red spectrometry (IR, FTIR) for analyzing weak points, dirt sources and dirt-in-paint investigations. In all parts of the process, with the aim of analyzing causal connections between soiling, dirt penetration and dirt-in-paint or film building problems.
- **Electrostatic charging** Measuring electrostatic charging and discharging processes using electrical field meters. In plastic painting processes, particularly, for locating areas with a critical electrostatic charge, and for checking the efficacy of discharge devices and processes.
- **Consumables in the painting process** Assessment of materials used in painting processes, like overalls, gloves, cloths, head-coverings, etc. In all parts of the process, to verify fitness for purpose and for a comparative assessment of the materials concerned with regard to particle and fiber release, plus wear and tear and washability.

We would be happy to tell you more in a personal consultation. Just get in touch with us!

