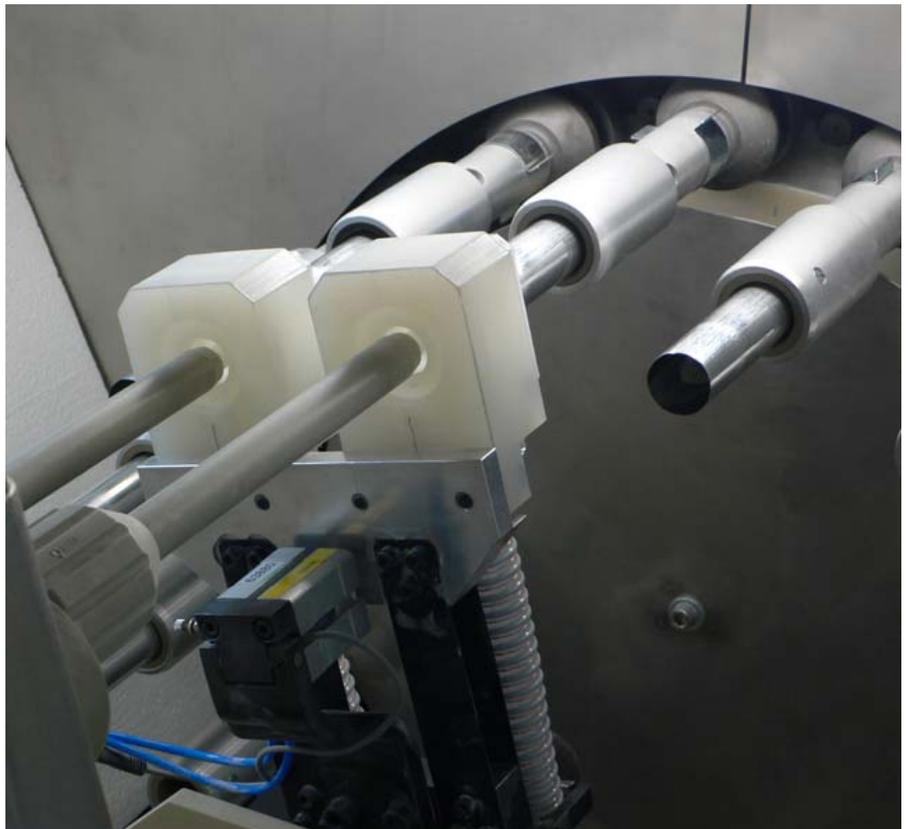




IAP

High-precision, dust-free 360° powder coating technology for the inside protection of aerosol cans and tubes.



Innovative 360° powder coating technology for monobloc cans and tubes

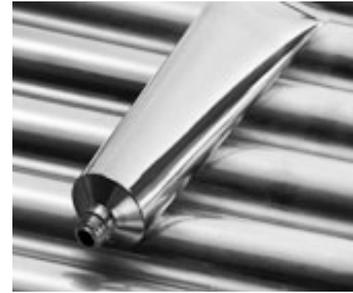
Rising costs for lacquers containing solvents and stricter legal regulations to reduce volatile organic compounds (VOCs) will cause can and tube manufacturers to invest in new technologies.



Frei AG has developed a new system to powder coat the complete inside of monobloc aerosol cans and tubes.

Besides the most economical consumption of powder, a main criterion is the absolutely secure mastering of the process and the maximum operational availability of such a system in a production line.

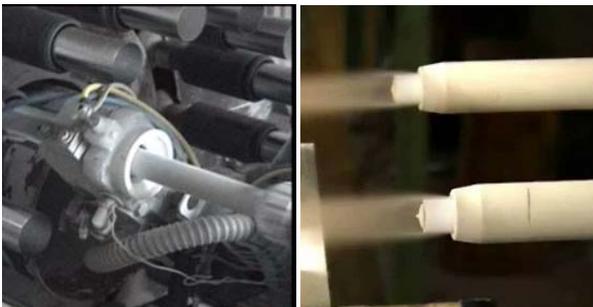
In order to achieve thin film thicknesses, very fine ground powders are necessary. However, the finer the powders are, the more important industrial safety becomes, i.e. if the particles are so small that they become respirable the new coating systems have to be designed in such a way that the finest particles which are no longer adher-



Old Sprimag machine equipped with Frei-Powder system including control and filter unit for a production capacity of 150 cpm.

ent and are not electrostatically rechargeable can be disposed safely and dust-free during the process.

A high-performance injector system for a precise adjustment of the powder discharge allows the user to define easily and exactly the desired powder quantity. The system guarantees a very precise film weight distribution. In order to guarantee the industrial hygiene each coating station is provided with a dust extraction system adapted to the respective can diameter.



The efficiency is nearly 100 %, i.e. practically no powder is wasted and no powder escapes to the environment.

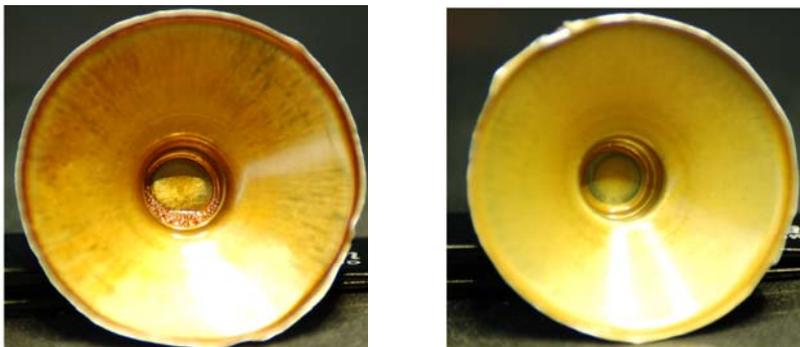
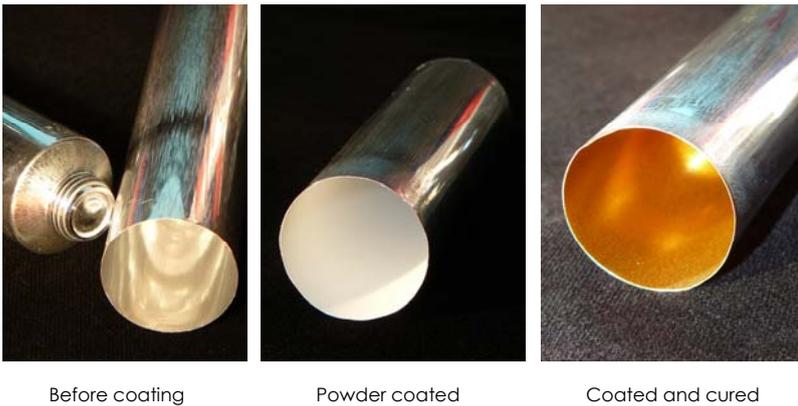
The gun positions can be set easily and quickly to the respective can or tube heights. Each gun coats one can in a single stroke.

The precisely adjustable coating parameters are operated via a state-of-the-art control technique and a user-friendly touch screen.

A process program for each can or tube can be provided, which is called up on the touch screen.



Frei IAP-S06 powder coating system mounted on an old wet lacquer spraying machine for tubes with membrane. Special: The cam disc drive has been replaced by servos allowing an even more precise powder particle distribution.



Powder vs. Lacquer

One of the main concerns in tube manufacturing can be eliminated: With powder there is no lacquer bubbling in the neck. Powder coated tubes do not show bubbles and the shoulder is evenly coated as is rest of the tube body.

Main Features

- Very precise film weight distribution.
- Selectable film thickness between 10 µm - 30 µm according to powder quality and set values.
- Porosity (Waco-Tester) max. 1.0 mA after curing the powder in the oven.
- Minimized air quantity and high powder concentration in the gun. Thus no powder cloud is generated but an annular powder jet that even allows a smooth coating of shaped can bottoms and tube necks.
- Dust-free coating of cans/tubes/cartridges without overspray.

Product-line

- Powder seam coating systems for welded cans
- Wet lacquer seam coating systems for inside and outside seams
- Curing systems for seam protection
- Exit conveyors for welding machines
- Embossers for aerosol cans
- 360° inside powder coating system for monobloc cans, tubes and cartridges
- Aluminium membrane sealing machines for welded cans