



## SIMONA® PP-DWU AlphaPlus – The Way Forward in Tank and Apparatus Construction



Above: Steel bath being loaded. Below: Internal lining with SIMONA® PP-DWU AlphaPlus. Steel bath with SIMONA® PP-DWU AlphaPlus inliner.

In February 2007, G&H manufactured a cathodic electrocoating bath with a metal shell for Faurecia, Pisek (Czech Republic). A cathodic electrocoating bath is used to coat parts with paint by an immersion process at room temperature, e.g. automotive components. To prevent potential equalisation between the medium and the steel bath, the latter was equipped with an internal lining of SIMONA® PP-DWU AlphaPlus using the loose-shirt method.

### The project at a glance

#### Project

Lining a cathodic electrocoating bath with SIMONA® PP-DWU AlphaPlus

#### ■ Dimensions:

17500 mm x 2100 mm x 2500 mm

#### Requirements

- High chemical resistance up to 38 °C
- No substances in the material which could interfere with paint wetting

#### Client

Faurecia, Pisek, Czech Republic

#### Contractor

G&H Kunststofftechnik GmbH & Co. KG, Sprockhövel  
www.gh-kunststofftechnik.de

#### Technical support

Business Development Industry  
SIMONA AG

#### Products used

- SIMONA® PP-DWU AlphaPlus sheets: 3000 mm x 1500 mm x 6 mm
- SIMONA® PP-H AlphaPlus pipes: d 32 – d 140 mm
- SIMONA® PP-DWU AlphaPlus welding rods

#### Duration of project

2007



Pictures from left to right: Steel bath with SIMONA® PP-DWU AlphaPlus inliner, lined steel bath with collection basket, SIMONA® PP-DWU AlphaPlus sheet with welding rods.

## Tank Lining with SIMONA® PP-DWU AlphaPlus – Also for Critical Applications

### Initial situation

Production of a cathodic electrocoating bath with the dimensions 17500 mm x 2100 mm x 2500 mm. This cathodic electrocoating bath is designed for coating parts with paint by an immersion process at room temperature. The parts to be coated are conveyed through the bath automatically. The outer shell of the bath is made of metal for strength reasons.

### Task

To avoid potential equalisation between the medium (paint) and the metal wall, the paint bath had to be lined with an insulating material which is devoid of substances which could interfere with paint wetting and will easily withstand a maximum bath temperature of 38 °C.

### Solution

With SIMONA® PP-DWU AlphaPlus, G&H had at its disposal a material which, on account of its excellent chemical resistance, also provides high safety margins even in critical applications. In order to line the steel bath by means of the loose-shirt method, sheets with a size of 3000 mm x 1500 mm x 6 mm were used. As regards the inliner, the most important requirement for the material employed was that it did not contain any constituents which would interfere with paint wetting. The formula of SIMONA® PP-DWU AlphaPlus meets this requirement, but nevertheless, wetting tests specially adapted to this paint system were conducted beforehand. Test results confirmed that SIMONA® PP-DWU AlphaPlus was the most suitable material for lining the bath.

To make it possible to recover any part falling off the conveyor from the filled bath, a basket was installed in the bath which can be pulled up above the level of the bath liquid using a winch. This basket is chiefly made of steel tubing which is entirely enclosed in SIMONA® PP-H AlphaPlus pipes.

### SIMONA® PP-DWU AlphaPlus

#### Properties

- High chemical resistance
- High impact resistance and rigidity
- Good stress crack resistance
- Excellent corrosion resistance
- Continuous service capability at high temperatures of up to +100 °C
- Permanently watertight, high-strength welded joints

#### Range of products

- Extruded sheets
- Welding rods
- Solid rods
- Pipes
- Fittings

### Further information:

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