The project at a glance

**Project**
Lining of a CDC dipping plant with SIMONA® PP AlphaPlus®
L x W x H = 9.32 x 5.74 x 3.96 m

**Requirements**
- Lining material free from substances detrimental to paint adhesion
- High chemical resistance
- High rigidity and stability
- Long service life
- Easy to process
- Permanently watertight and strong welded connection

**Client**
Claas Selbstfahrende Erntemaschinen GmbH, Harsewinkel, Germany

**Contractor**
G&H Kunststofftechnik GmbH & Co. KG, Sprockhövel, Germany

**Technical support**
SIMONA AG, Technical Service Center

**Products used**
- SIMONA® PP AlphaPlus® Sheets, 3,000 x 1,500 x 12 mm
- SIMONA® PP AlphaPlus® Pipes, 125 mm x 11.4 mm, SDR 11
- SIMONA® PP AlphaPlus® Welding Rods

**Project duration**
2 weeks

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SIMONA® PP AlphaPlus® – The lining material for superior safety in plant engineering

G&H Kunststofftechnik GmbH & Co. KG specialises in the lining of CDC tanks for cathodic dip coating (CDC) of body panels. For the first time in the commercial vehicle sector, an existing steel CDC dipping plant was to be lined with plastic for Claas Selbstfahrende Erntemaschinen GmbH. G&H chose SIMONA® PP AlphaPlus® as a proven lining material for this purpose.
Initial situation
In cathodic dip coating (CDC) the entire body shell of a commercial vehicle is
dipped in a tank of liquid paint to prevent corrosion. For reasons of stability,
CDC dipping plants are made of steel. To ensure the necessary electrical insu-
lation of the steel tank from the electro-dip coating, the inside of the tank is
traditionally coated with a GRP laminate.

Task
For the first time in the commercial vehicle sector, the existing steel tank of a
CDC dipping plant was to be lined with plastic. Two key requirements had to be
fulfilled when selecting a suitable lining material. The material had to be free
from substances detrimental to paint adhesion and chemically resistant to the
dipping paint. A further challenge was presented by the large plant dimensions
(L x W x H = 9.32 x 5.74 x 3.96 m). The material therefore had to guarantee
ease of processing and provide a permanently tight and strong welded con-
nection.

Solution
The properties of SIMONA® PP AlphaPlus® made it the ideal choice for this appli-
cation. Thanks to its alpha-crystalline modification, SIMONA® PP AlphaPlus®
has improved welding characteristics, higher notched impact strength together
with improved rigidity and increased chemical resistance. The fine and stable
crystalline structure of the alpha-nucleated material reduces stress cracks.
Particularly in critical zones such as weld seams, in which internal or externally
applied stresses occur, resistance is increased and the highest level of safety
is ensured.

The tank was manufactured by G&H from SIMONA® PP AlphaPlus® Sheets,
Pipes and Welding Rods, and inserted as a “loose shirt lining” in the steel tank
of the CDC dipping plant. SIMONA® PP AlphaPlus® thus prevailed once again
as an alternative lining material against GRP laminate.