

PPG PSX[®] 700 PPG SIGMACOVER[™] 280

High color- and gloss retention
plus reduced maintenance costs
benefit iconic bridge

Case study



The Customer

The municipality of Rotterdam

The Project

The Willemsbrug, Rotterdam

The Challenge

To provide a system for the bridge that would last for 40 years with minimum maintenance required during that period. The color had to remain the same for at least 10 years with negligible loss of gloss over the years and resistance to road salt and graffiti cleaners. The work also had to be carried out while the bridge remained open with minor noise disturbance.

The Solution

PPG SIGMACOVER[™] 280 primer/sealer
PPG PSX[®] 700 highly durable topcoat

The Benefits

PPG SIGMACOVER 280 is a universal epoxy anti-corrosive primer which cures at temperatures down to 5°C (41°F) and offers excellent water- and corrosion resistance. The PPG PSX 700 high-gloss coating is fast drying, easy to apply with superior color- and gloss retention. It offers excellent corrosion, abrasion and chemical resistance.

The Result

Our system delivers greater color- and gloss retention than traditional polyurethanes can provide. The iconic structure will also benefit from extended protection service life and reduced maintenance costs.

The Customer

The municipality of Rotterdam commissioned the renovation of one of Rotterdam's most iconic landmarks, the Willemsbrug, which was recently restored to its original glory, including its striking ruby red color scheme. The 350-meter long Willemsbrug spans the Nieuwe Maas river, linking the northern part of Rotterdam with the district of Feijenoord, home of the eponymous football club.

With 65-meter-tall towers, the cable span bridge dominates that part of the Rotterdam landscape, and its red color is a stark contrast to the neighboring Erasmusbrug, which is light blue. The bridge renovation was carried out by Dutch firm Brandsafway/Venko.

The Challenge

After nearly 40 years of service, the bridge renovation required a new coating system that would last for another 40 years with minimum maintenance required during that period.

The Willemsbrug is a landmark in the city and a very important access artery for the city, so work had to be carried out while the bridge remained open, which needed the use of coverings on the pylons to contain the blasting grit.





The municipality specified high resistance to road salt reflecting the bridge's role as a key route into the center of Rotterdam; this necessitated anti-graffiti properties from the topcoat, so that any markings could be easily removed.

Due to the bridge's iconic color scheme, there was also a specific prerequisite that the color would remain the same for at least 10 years with a minimum loss of gloss over the years.

The Solution

We provided a durable preservation system based on thermal-sprayed zinc aluminum and 200-micron wet paint coating, which comprised the PPG SIGMACOVER 280 primer/sealer and the PPG PSX 700 topcoat.

This system delivers long-term corrosion protection for the steel structure, along with a higher gloss finish, and greater color- and gloss retention, benefits that acrylic polysiloxanes and traditional polyurethanes cannot offer.

The Benefits

Our PPG PSX 700 system offers three times the abrasion resistance of polyurethanes, two times the adhesion of epoxies with reduced accumulation of dirt and mildew. The fast-drying, easy to apply two-coat system provides improved productivity when compared to the standard three-coat system.

Due to its excellent durability, the system delivers extended protection and minimum maintenance. Moreover, its low VOC and no isocyanate composition minimize impact to the environment while extending coating protection.

PPG PSX 700 Key Features and Benefits

- Superior gloss- and color retention - reduced maintenance costs
- Excellent corrosion- and chemical resistance - lower application time and downtime
- Abrasion resistance (3 x typical urethane)

- Superior adhesion (2 x typical epoxy)
- Limited accumulation of dirt and mildew
- Isocyanate-free - reduces health and environmental impact
- Unlimited recoat window: wash, dry, and reapply - eases future touch-up and repair tasks
- Ultra-low VOC - significant reduction in solvent emissions and hazardous waste
- Resistant to graffiti cleaners and road salt
- Broad color palette
- Over 30 years' proven performance

PPG SIGMACOVER 280 Key Features and Benefits

This coating is a universal epoxy anticorrosive primer, based upon pure epoxy technology with excellent adhesion to steel, shop primer, galvanized steel and non-ferrous metals. It is suitable on wet blast-cleaned substrates (damp or dry) with good flow- and wetting properties. Compatible with well-designed cathodic protection systems, the coating cures at temperatures down to 5°C (41°F) and offers good water- and corrosion resistance.

The Result

In addition to the exceptional aesthetic appearance of the renewed Willemsbrug bridge, the municipality will also benefit from the system's extended protection service life and reduced maintenance costs.

"We were pleased to have been involved with the renovation of such an important landmark in the Netherlands," said van Vliet, KAM/Segment Sales Manager Infrastructure Europe.

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Asia Pacific ☎ +86-21-6025-2688 ✉ ppgpmc.ap@ppg.com | Europe, Middle East and Africa ☎ +32-3-3606-311 ✉ customers@ppg.com

Latin America ☎ +57-1-8764242 ext. 201 ✉ ppgpmcandean-ca@ppg.com | North America (US & Canada) ☎ +1-888-9PPGPMC ✉ PMCMarketing@ppg.com

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