

This bridge in Mumbai, India is more than 2 ½ miles long and must be protected from corrosive sea water, torrential rain, tropical sun, and caustic exhaust fumes.

Protecting a World Class Bridge

The Bandra Worli Sea Link is one of the world's longest bridges. Stretching 5.6 kilometers (more than 2.5 miles), the bridge connects the western suburbs of Mumbai, India with the downtown area. The city, formerly known as Bombay, formally opened the bridge June 30 of this year, even though it isn't expected to be finished for a few more months. When opened last June, the bridge reduced travel time from nearly an hour to 7 minutes, and was soon carrying more than 25,000 vehicles a day.

Except for the 264 support cables, the bridge is made almost entirely from concrete. The road deck, support columns, and two 180-foot high towers were all cast-in-place. But exposed to tropical sun, corrosive pollutants, salt water, and torrential rainfall, finding a coating to protect the bridge was a major challenge.

The contract went to German firm Remmers Baustofftechnik GmbH.

"We were quite pleased to be awarded the coatings contract for such a high-profile project," said Harry van Dijken, export director at Remmers. "A combination of our excellent reputation as a coatings manufacturer, the high quality of our products and our local representation in India were crucial to securing the business," van Dijken said.

The upper portion of the bridge will use Remmers' premium Betonacryl coating. According to Remmers, it has excellent durability including resistance to driving rain and splash resistance, and can withstand carbon dioxide and water vapor.

To further ensure the coating's ability to withstand the severe weather of the region, the coating was formulated with a Mowilith acrylic emulsion from Celanese Emulsion Polymers.

"The basic properties of the emulsion were essential for use in the open sea environment," said David Faust, market manager from Celanese Emulsion Polymers. "Celanese emulsions have been trusted for decades for use in Europe and we are excited to be affiliated with such a significant project here in India," Faust said.

While the bridge is already officially open, painting work is expected to continue through the remainder of the year, depending upon the extent of the rainy season. It is estimated that it will require more than 30,000 gallons of coating. The color: a shade of gray.

