

The background of the slide features a photograph of the Troja Bridge in Prague, showing its distinctive white arch and yellow diagonal hangers. The image is partially covered by a large blue curved shape on the right side, which serves as a backdrop for the text.

Innovation, beautiful design and practicality – award-winning ingredients in Prague

The Troja Bridge over the River Vltava in the Czech capital Prague is now in full use following its official opening in late 2014. The 262m long bridge carries pedestrian and cycle traffic, four lanes of road traffic, and a double-tracked tram line. Designed by Mott MacDonald, constructed by Metrostav and coated by Hempel, it is already a landmark in Prague, famous for its slender arch and low height-to-span ratio.

In fact, the innovative design of the Troja Bridge lies in the fact that it reconfigures the hangers of the classic bowstring arch from a conventional vertical arrangement to a diagonal one, thus providing four times more rigidity and improving overall performance. Such innovation could not go unnoticed and in 2015, the Troja Bridge won the ECCS's Steel Bridge Award.

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In the words of the ECCS's Steel Bridge Award jury:

“The beautiful design is developed to suit the construction process and carries the heavy loads of tramways, cars, and pedestrians into the heart of Prague. The bridge promotes the qualities of steel by its visible slender structure and elegance. The effective lighting accentuates the expressive form. Troja Bridge is like a sculpture, and a beautiful addition to the city of Prague.”

Significant words of praise for a project that for Hempel started like any other, with our coating advisors defining the most appropriate system for the customer's specifications. However, its unique design called for a unique solution and finally a high zinc primer was specified. Our two-component, zinc-rich epoxy primer Hempadur Zinc 17360 cures to a hard-wearing, highly weather-resistant coating and is used as a versatile, long-term primer on steel in severely corrosive environments.

On this occasion, the primer was applied in the workshop before the main steel parts were transported to the site. Following touch-up work in assembly areas, a second primer and intermediate layers were applied using Hempadur Fast Dry 15560, which enabled work to progress smoothly while also reducing the risk of affecting property around the site. Finally, the bridge was roller-coated with Hemptthane HS 55610, the fast-dry version of our polyurethane topcoat with zinc phosphate that provides the highest standards of long-lasting colour fastness and dries to touch in just 3 hours at 20°C.

An extra intermediate layer of Hempadur Fast Dry 15560 was used on structural steel parts anchored in concrete, and the entire system was successfully validated in accordance with Ministry of Transport regulations for 30 years' service life and tested in an accredited laboratory for high durability in C5-I environments.



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