



Hempel Provides Protection for Shenzhen-Zhongshan Bridge

The Shenzhen-Zhongshan Bridge is an important part of China's national highway network across the Pearl River Estuary and a core transport hub project in the Guangdong-Hong Kong-Macao Greater Bay Area. The cross-sea cluster project integrates bridges, islands, tunnels and underwater interchanges, with the Shenzhen-Zhongshan Bridge being about 24 kilometres long, consisting of a 6.84 kilometre long submarine tunnel and a bridge section of about 17 kilometres.

Shenzhen-Zhongshan Bridge is a 1,666-metre main span suspension bridge with a 270-metre-high main tower, equivalent to the height of a 90-storey building, and a navigational clearance of 76.5 metres.

With rich corrosion protection experience in the Chinese bridge market, Hempel is honored to provide protection for the Shenzhen-Zhongshan Bridge.

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Overview	
Fabricator	China Railway Baoji Bridge Group Co., Ltd. Wuchang Shipbuilding Industry Group Co., Ltd.
Main products	Exterior surface: Hempadur Avantguard Hempel's Epoxy MIO Hempatop Finish 830 HS
	Interior surface: Hempadur Avantguard Hempadur Mastic
Total coating consumption	Around 2 million litres
Application	Spray, roller coating



The Challenge

The Shenzhen-Zhongshan Bridge starts coating application in 2020 and opened to traffic at the end of June 2024. This posed a great challenge to the quality and schedule control of the steel box girders production. As the construction of the Shenzhen-Zhongshan Bridge coincides with China's increasingly strict environmental protection requirements, this mega project must be completed with the protection of the environment and the ocean as its obligation. Therefore, protective coatings need to be environmentally friendly, in addition to excellent anti-corrosion properties.

The Solution

The Shenzhen-Zhongshan Bridge has achieved five world records, including the largest span of an offshore suspension bridge and the highest navigable clearance. The project has formulated special technical standards to ensure that the Shenzhen-Zhongshan Bridge meets the requirements of safety, high quality, smart, high efficiency, durability, economy, eco-friendly and aesthetics.

Hempel did a lot of research on the project site in the early stage, combined our rich experience in Chinese bridge market, we provided customized coating solutions for the Shenzhen-Zhongshan bridge, our Avantguard not only reduces the effects of corrosion but also provides excellent protection, while the Hempatop Finish 830 HS Fluorocarbon Topcoat has excellent light and colour retention properties, maintaining a long-lasting decorative appearance, even in heavily polluted environments. By keeping the VOC emissions of the coatings to a minimum, Hempel not only helped the sustainability goals of our customers, but also added a splash of colour to the super project.