

PSA CHENNAI TIRE CRANES

Ranked first in the port machinery industry for 18 consecutive years, the Shanghai Zhenhua Heavy Industries Co., Ltd. (ZPMC) has constructed approximately 80% of all shore bridges for ports across the world. With each crane project, they continue to innovate and improve their designs to ensure the utmost performance for their customers. And their latest crane project, for PSA Chennai in India, added a new innovation to their tire cranes: a completely water-based, low VOC, high-performance coatings system from Tnemec.

“Port machinery often requires an enormous amount of coatings, so the products need to be consistent and reliable,” said Sara Guo, general manager of Tnemec Coatings (Shanghai) Co. Ltd. “And they need to last for a long time, so that the owners don’t need to repaint the structures very often.”

Over the years, the team at ZPMC have trusted Sara and Tnemec distributor, Genesis Protective Coatings, to help them supply quality coatings for the interior and exterior of the cranes.

For the PSA Chennai cranes, the team applied a revolutionary system to coat the exterior steel. Steel surfaces were prepared and primed with Series 90-88 Tnemec-Zinc, a waterborne epoxy zinc-rich primer for long-term corrosion protection. The exterior surfaces then received an intermediate coat of Series 1224 Epoxoline WB and a coat of an innovative waterborne acrylic finish coat, Series 1040 Tnemec Topcoat.

The exterior coating system passed the requirements of ISO 12944-2018 C5 after 1500 hours of QUV, an ultraviolet accelerated aging test, with the discoloration value less than 3, the light loss rate less than 30%, and no pulverization and cracking.

The interior steel was coated with Tnemec’s patented waterborne epoxy coating, Series 27WB Typoxy. Series 27WB is the most commonly used interior protective coating system at ZPMC for low VOC applications.

“These water-based coatings offer the best of both worlds: the performance of solvent-based products but without all the carbon emissions,” added Guo. “And everyone has been satisfied with the coatings thus far, applicators and engineers alike.”

The volatile organic compounds (VOCs) of all the coatings are less than 80 g / L, a significant difference when compared to traditional solvent-based products. This system contributes to the “green” initiatives of the Chinese government, helping limit emissions and VOCs from unnecessary sources.

FEATURED PRODUCTS

Series 90-88 Tnemec-Zinc
Series 1224 Epoxoline WB
Series 1040 Tnemec Topcoat

Series 27WB Typoxy



PROJECT INFORMATION

Project Location

Shanghai, China

Project Completion Date

January 2022

Owner

PSA Chennai

Fabricator / Applicator

Shanghai Zhenhua Heavy Industries Co., Ltd. (ZPMC)

ZPMC, a major crane manufacturer located in Shanghai, China, utilized a low VOC, water-based coating system from Tnemec to coat the exterior of their tire cranes for PSA Chennai.

