



ZPMC switches to Avantguard[®] for superior corrosion protection

ZPMC is the world's largest manufacturer of cargo handling equipment, including port terminal cranes. These cranes are used for loading and unloading containers, and they need a heavy-duty anti-corrosive coating system to protect them from the harsh dockside saltwater atmosphere. When ZPMC was asked to produce four super-post-panamax container cranes for delivery in Europe, it decided to switch to Hempadur Avantguard 750, for superior protection against corrosion¹.

Avantguard is fast drying with best-in-class overcoating intervals². The products are easy to apply, even in high temperatures and humidity as shown in exposure tests and there is less rework due to cracking, as the coating is more tolerant, even with high DFTs.

By switching to Avantguard activated zinc primers, ZPMC expects to benefit from simplified application procedures, longer asset life-cycles and reduced maintenance.

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| At a glance | |
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| Customer | Shanghai Zhenhua Heavy Industry Co., Ltd. (ZPMC) |
| About | ZPMC is the world's largest manufacturer of cargo handling equipment, from cranes and bulk coal handling machinery to steel bridges and offshore products. It is headquartered in Shanghai and has eight production units in China. |
| Coating primer | Hempadur Avantguard 750 |
| Application | Airless spray, touch-up with roller and brush |



The challenge

Port terminal cranes need a robust coating system to protect them from the harsh saltwater atmosphere. ZPMC had been using one of our zinc-rich epoxy primers to protect its cranes, and was pleased with the coating's performance. However, the company wanted an even longer-lasting solution when manufacturing four super-post-panamax container cranes for delivery in Europe.

The solution

We recommended a system based on Hempadur Avantguard 750, an advanced zinc epoxy that uses Avantguard activated zinc technology to improve the anti-corrosive performance. Our Technical Service team in China worked closely with ZPMC when the super-post-panamax container cranes were coated at the start of 2015. ZPMC's applicators were particularly pleased with the coating's ability to tolerate high dry film thicknesses without cracking, which ensures they remain easy to apply even if application conditions are not ideal.

The cranes were transported to their final destination in Malta in the middle of 2015. We inspected the cranes upon arrival and found the coating system in perfect condition. As part of our agreement with ZPMC, we will continue to monitor the performance of the system over the coming years. ZPMC is convinced that its customers will benefit from the long-lasting and more robust protection offered by Hempadur Avantguard coatings.



About Avantguard

Only around one-third of the zinc in a traditional zinc epoxy has an anti-corrosive effect. Avantguard technology activates all of the zinc in the coating. This significantly improves the coating's anti-corrosive performance and mechanical strength, while ensuring it remains easy to apply. Visit avantguard.hempel.com for more information.

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1. Based on activated zinc technology, our patented Hempadur Avantguard coatings have been proven to deliver superior corrosion protection compared to key competitor zinc rich epoxy primers. This superiority has been independently proven by third party laboratory neutral salt spray tests according to ISO 9227. In this test, steel protected with Avantguard produced a lower evolution of rust creep than the competitors, assessed according to ISO 12944-6, when tested up to 3x the duration for C5-high environments.
2. Avantguard's overcoating interval is a minimum of 33% faster than competitor zinc-rich epoxies when comparing product data sheets.