



Avantguard[®] redefines protection for onshore processing facility

Elco, a leading engineering and fabrication company, has chosen Hempel's Avantguard technology to ensure their customer benefits from Avantguard's superior, long-lasting corrosion protection and improved application properties.

Elco is carrying out fabrication work for the British Petroleum (BP) Project at Oman where British Petroleum have signed a long term contract with the government of Oman to develop a major new gas processing facility to serve the Khazzan & Makarem gas fields.

Elco identified Hempel as the right coatings supplier for the onshore Khazzan and Makarem processing facility, to give the best corrosion protection available.

The system that Elco are using includes Hempadur Avantguard 750, a primer that gives superior corrosion protection in severely corrosive environments¹.

The Khazzan project is of strategic importance to us. We are fully aware of the benefits offered by activated zinc technology, hence our choice of Avantguard over conventional zinc epoxy.

Anil Kumar, Project Manager for Elco

Elco chooses Avantguard for superior corrosion protection

At a glance	
Customer	Elco International Engineering Co. L.L.C.
About	Elco is a leading engineering and fabrication company offering manufacturing solutions to the Oil, Gas & Construction industries.
Coating system	Hempadur Avantguard 750 Hempadur MIO 47950 Hempathane HS 55610
Application	Air spray gun

The challenge

BP is using its position as one of the world’s pioneers in tight gas production to develop the Khazzan & Makkarem fields, which are estimated to contain at least 30–40 trillion cubic feet (tcf) gas. The Khazzan & Makkarem fields are one of the Middle East’s largest unconventional gas resources.

The challenge is to ensure the structural steel pipe racks within the facility are protected. Elco wanted a coating system that would offer its customer the best long-term anti-corrosive performance available.

The solution

Elco chose a coating system that combined Hempadur Avantguard 750, Hempadur MIO 47950 and Hempathane HS 55610. Hempadur primers use Avantguard, our activated zinc technology that provides proven superior corrosion protection¹. Avantguard is also 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.

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, which significantly improves the coating’s anti-corrosive performance and mechanical strength.



Unlike a number of zinc-rich coating technologies, Avantguard technology improves performance without increasing zinc content. For Elco’s customers, this means reduced corrosion, improved performance in extreme temperatures and improved mechanical strength.

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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.