

BELZONA SOLUTION FOR INTERNAL REBUILDING & COATING OF PUMP DIFFUSER BOWL

ID: 9766



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PROBLEM

A power station customer faced severe corrosion in the diffuser bowl and vanes of their seawater intake pump due to prolonged exposure to the harsh marine environment. The resulting deterioration compromised efficiency, reliability, and structural integrity, increasing the risk of equipment failure, costly maintenance, and unplanned downtime. To address this, an urgent, high-performance corrosion-resistant solution was required to restore integrity, enhance durability, and safeguard long-term operational performance.

APPLICATION SITUATION

Extensive corrosion in a power station's seawater intake pump diffuser bowl and vanes from prolonged marine exposure is undermining efficiency, reliability, and structural integrity. A prompt corrosion-resistant solution is essential to improve durability, prevent equipment failure, and minimize maintenance costs.

APPLICATION METHOD

The application was carried out in accordance with Belzona Know-How System Leaflets CEP-1, CEP-3, and CEP-4, ensuring compliance with industry best practices for corrosion protection and equipment longevity. The process began with grit blasting, followed by cleaning with Belzona 9111. The pitted areas were then rebuilt using Belzona 1311 (Ceramic R-Metal) as per the Belzona IFU. Finally, a two-coat system of Belzona 1321 (Ceramic S-Metal) was applied, adhering to the Belzona IFU guidelines.

BELZONA FACTS

Belzona 9111 (Cleaner Degreaser) is a high-performance cleaner and degreaser formulated to remove contaminants such as oils, grease, dirt, and residues from surfaces, ensuring proper preparation before applying Belzona repair and protection systems.

Belzona 1311 (Ceramic R-Metal) is a two-part epoxy repair composite designed for rebuilding and protecting metal surfaces against erosion and corrosion. With excellent adhesion, chemical resistance, and mechanical strength, it is ideal for applications on pump casings, valves, and pipes.

Belzona 1321 (Ceramic S-Metal) is a two-part epoxy system for metal repair, offering exceptional resistance to wear, abrasion, and corrosion. Suitable for resurfacing and restoring worn or damaged metal components, it is compatible with both ferrous and non-ferrous metals.

INDUSTRY

Power

LOCATION

ABU DHABI, UNITED ARAB EMIRATES

APPLICATION DATE

January 2015

PRODUCTS

Belzona 1311 (Ceramic R-Metal)
Belzona 1321 (Ceramic S-Metal)
Belzona 9111 (Cleaner Degreaser)

SUBSTRATE

Carbon steel

PHOTOS

1. Extensive corrosion in a power station's seawater intake pump diffuser bowl and vanes from prolonged marine exposure is undermining efficiency, reliability, and structural integrity.
2. After grit blasting, followed by cleaning with Belzona 9111.
3. The pitted areas were then rebuilt using Belzona 1311 (Ceramic R-Metal) as per the Belzona IFU
4. Finally, a two-coat system of Belzona 1321 (Ceramic S-Metal) was applied, adhering to the Belzona IFU guidelines.

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