

# Nuclear Plant Benefits from Using Belzonas Long Lasting Pump Coatings

ID: 7735

Industry: Power

Application: PDP-Positive Displacement Pumps

Customer Location: Flamanville, France

Application Date: Original Application – 1998

Substrate: Steel

Products: \* Belzona 1321 (Ceramic S-Metal) ,

\* Belzona 5821 ,

## Problem

The sand and other solid particles suspended in the solution were causing erosion and wear damage on the pump lining and the maintenance team needed a solution to ensure continued operation of the equipment. In addition, the expectation of the solution was an in-service lifespan of at least 8 years, ruling out a significant number of alternative repair methods.



## Photograph Descriptions

- \* 1. Pump removed from service for inspection ,
- \* 2. Inspection reveals the coating is still in excellent condition after 20 years ,
- \* 3. Coating frost blasted before application of Belzona 5821 ,
- \* 4. Pump reinstalled with additional barrier protection ,

## Application Situation

Cooling water, sourced from the sea, was causing erosion corrosion damage to the pump casings.

## Application Method

Any coating also needed to be suitable for full immersion, as the pump casing is frequently exposed to standing seawater, which can be very corrosive over time. As a result, a Belzona 1321 (Ceramic S-Metal) pump lining was chosen and the application was carried out in accordance with the Belzona Know-How System Leaflet PDP-5.

For more examples of Belzona Know - How In Action, please visit <https://khia.belzona.com>

ISO 9001:2015

FS 695214

ISO 14001:2015

EMS 695213

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## Belzona Facts

This power station had been coating cooling water pumps with Belzona for over 25 years, with each application demonstrating excellent erosion-corrosion resistance over that period. In this instance, the application was no different. Originally instated in 1998, the pump and coating were inspected 20 years later and found to still be in excellent condition. As a future-proofing measure, the Belzona Distributor frost blasted the coating and applied an additional layer of Belzona 5821 before returning to service. This high-performance system is ideally suited for equipment operating under immersion and erosive conditions and will extend the pump's life expectancy well beyond its original prescription.

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