

# Belzona Repairs and Protects Pump Volute in Nuclear Plant

ID: 7582

Industry: Power  
 Application: CEP-Centrifugal Pumps  
 Substrate: Concrete  
 Products: \* Belzona 4111 (Magma Quartz) ,  
 \* Belzona 1321 (Ceramic S-Metal) ,

Customer Location: Nuclear Power Station, France  
 Application Date: 2011

## Problem

After several years in service, the concrete started to show signs of erosion, showing regular wear and cracking. Repairs were needed, otherwise this wear would have accelerated and risked causing damage to heat exchangers.



## Photograph Descriptions

- \* 1. Surface preparation. ,
- \* 2. Application of Belzona 4111 in progress to rebuild the concrete wall. ,
- \* 3. Final coat of Belzona 1321. ,
- \* 4. Finished application. ,

## Application Situation

This large concrete volute (120 m<sup>2</sup>) is a part of a big cooling pump from the secondary circuit in a nuclear power plant. The pump is moving 22m<sup>3</sup>/seconds of cooling water.

## Application Method

The application was carried out in accordance with Belzona Know-How System Leaflet CEP-03. Belzona 4111 and Belzona 1321 were used to repair and protect the walls.

## Belzona Facts

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

Belzona products are  
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There was no real alternative other than rebuilding with concrete, leaving it prone to the same damage. The repair of the two volutes was done in full respect of the scheduled shutdown of the plant, so without any consequences for the production activity. The pump volute is inspected annually, this was done most recently in 2017 and still found to be in an excellent condition.

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