

# Refurbishment of a marine caisson

ID: 9439

Industry: *Marine* Customer Location: *France*  
Application: *CEP-Centrifugal Pumps* Application Date:  
Substrate: *Stainless-steel*  
Products: *Belzona 1111 (Super Metal), Belzona 1331, Belzona 5811 (Immersion Grade)*

## Problem

*A caisson is a form of lock gate, consisting of a large floating iron or steel box. This can be flooded to seat the caisson in the opening of the dock to close it, or pumped dry to float it and allow it to be towed clear of the dock.*

*This caisson was suffering from significant corrosion, leading to an ineffective seal. The two steel installation surfaces (18000 x 1100 mm), sealed in the concrete of the boat-carrier, were completely corroded and damaged. The surface condition no longer made it possible to obtain full waterproofing when installing the louver closing seal.*

*The client hadn't found a long-lasting solution for this structure other than applying two coats of paint every year when the tides were high. Welding new sheets was also impossible due to the deformations suffered and the lack of flatness obtained.*



Caisson before the Belzona repair

Caisson before the Belzona repair from a different perspective

Caisson after the Belzona repair

## Application Situation

The approximate volume of products required for this application was 15 kg of Belzona 5811, 130 kg of Belzona 1111 and 50 kg of Belzona 1331 for 2 faces of approximately 20 m<sup>2</sup>/each. The budget for such an operation is around 100,000 € for the customer, approximately 60% being product.

## Application Method

The client was responsible for setting up the scaffolding and washing HP and salt away for saline decontamination. Alliatech could then begin the application with sandblasting (SA2.5 /75µ roughness) and application of Belzona 5811 in 250µm to prevent corrosion before rebuilding with Belzona 1111. For final protection, two coats of Belzona 1331 were applied with a brush.

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## Belzona Facts

The Belzona solution was selected over other 'traditional' solutions due to the speed, precision, and cold-working nature of this proposed solution. The client also made the decision based on the relationship we have with them and the quality of previous applications.

There was no real competition for this solution as Belzona is so well recognised by the client. In addition, competitors do not offer 'in house' applicators.

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