

# REPAIR AND PROTECTION OF HYDRAULIC ROTOR OF MARITIME DOCK

ID: 9503

Industry: *Marine*  
Application: *SOS-Ships and Offshore Structures*

Customer Location: *Portugal*  
Application Date: *June 2024*

Substrate: *Carbon steel*  
Products: *Belzona 1121 (Super XL-Metal), Belzona 1321 (Ceramic S-Metal), Belzona 1811 (Ceramic Carbide), Belzona 9111 (Cleaner Degreaser)*

## Problem

*The water inlet shut-off equipment at the maritime dock was losing efficiency due to the degradation and wear of the rotor. This rotor is one of six that the dock has and that have been repaired by our company to make the set more efficient.*



Initial Rotor State



Application of Belzona 1811  
(Ceramic Carbide)



Application of Belzona 1121  
(Super XL-Metal)



Coating with Belzona 1321  
Ceramic S-Metal

## Application Situation

With our repair and coating, the customer prevents the rotor from wearing out further, thus reconditioning and protecting it with our products, avoiding replacing the part, which is very expensive, while improving its operating efficiency and energy efficiency.

## Application Method

The equipment was blasted according to ISO 8501-1 SA 2 1/2 to create the necessary roughness, the salts from marine contamination were removed and the surface was degreased and cleaned with Belzona 9111 Cleaner Degreaser. Belzona 1811 Ceramic Carbide was then applied to fill the worn and cavitated areas, then filled and levelled with Belzona 1121 Super XL-Metal and then a two-layer coating of Belzona 1321 Ceramic S-Metal was applied.

## Belzona Facts

Great cost savings, as it avoids replacing the rotor, increasing its efficiency and energy efficiency.

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ISO 9001:2015  
FS 695214  
ISO 14001:2015  
EMS 695213

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