

# LANDING CRAFT WATER JET NOZZLES PROTECTED BY BELZONA

ID: 7995

Industry: Marine  
Application: SOS-Ships and Offshore Structures

Customer Location: Cadiz - Spain  
Application Date: October 2018

Substrate: Stainless Steel  
Products: \* Belzona 1321 (Ceramic S-Metal) ,  
\* Belzona 1812 (Ceramic Carbide FP) ,

## Problem

High flow rate, salt from sea water, and entrained solids cause accelerated wear of the water jet nozzles, therefore a protective system was required.



## Photograph Descriptions

- \* 1. View of the vessel hull ,
- \* 2. Surface prepared, and Belzona 1321 (Ceramic S-Metal) applied ,
- \* 3. Belzona 1812 (Ceramic Carbide FP) applied ,
- \* 4. Completed Application ,

## Application Situation

Stainless Steel water jet nozzles on a naval landing craft in dry dock.

## Application Method

The stainless steel nozzles were machined to leave a rough profile to maximise the adhesion of the Belzona materials. Where the nozzles connect with the hull, grit blasting was carried out to achieve a white metal finish in accordance with Swedish Standard SA 3. Belzona 1321 (Ceramic S-Metal) was applied to the surface entire surface by brush. Belzona 1812 (Ceramic Carbide FP) was applied in the areas subject to high impact and abrasion. A final layer of Belzona 1321 was applied over the entire area to leave a smooth surface. The application was carried out in accordance with a modified version of Belzona System Leaflet SOS-02.

## Belzona Facts

Belzona was chosen over alternative materials due to the extensive range of Belzona products, which allowed the customer to select the most appropriate material for each section of the nozzle. At the inlet section, very high abrasion resistance was needed,

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

Belzona products are  
manufactured under an ISO  
9000 Registered Quality  
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as this is where most of the stones and entrained solids impact the surface. However at the trailing edge of the nozzle, the conditions are not a severe, therefore cost can be saved by selecting the right material.

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