

# BELZONA ANTI-CAVITATION SYSTEM PROTECTS NAVAL VESSEL

ID: 5795

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

Customer Location: *US Navy Base, Japan*  
Application Date: *2012*

Substrate: *Carbon Steel*  
Products: *\* Belzona 1311 (Ceramic R-Metal) ,*  
*\* Belzona 1341 (Supermetalgilde) ,*  
*\* Belzona 2141 (ACR-Fluid Elastomer) ,*

## Problem

*Due to the shape of the rudders, coupled with disturbed water flowing from the propeller, and the high manoeuvrability of the vessel, cavitation damage occurs leading to severe erosion corrosion pitting.*



## Photograph Descriptions

- \* Overview of the rudders ,
- \* Close-up view of a damaged area ,
- \* Belzona 1341 applied as the first coat ,
- \* Application completed with a coating of Belzona 2141 ,

## Application Situation

Naval vessel rudders.

## Application Method

The application was carried out in accordance with Belzona Know-How System Leaflets SOS-1 & SOS-2. Rebuilding of the pitted areas was carried out using Belzona 1311. Belzona 1341 was used as the first coat to provide optimum adhesion and corrosion resistance. The Belzona 2141 system was applied as the top coating to provide cavitation resistance.

## Belzona Facts

The Belzona 2141 system has been designed to resist the effects of cavitation and impact, as well as providing excellent corrosion

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  
manufactured under an ISO  
9000 Registered Quality  
Management System.

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protection. The Belzona application was inspected after 2 years and was mostly found to be in perfect condition with only minor damage in the local areas. The coating had overcome the major cavitation and erosion problems and was easily repaired with minimal downtime. The client was satisfied with the Belzona solution.

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