

# BELZONA PLATE BONDING ON SHIP'S DECK

ID: 7506

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

Customer Location: *Cape Town, South Africa*  
Application Date: *July 7, 2017*

Substrate: *Mild Steel*  
Products: *\* Belzona 1111 (Super Metal) ,*  
*\* Belzona 1321 (Ceramic S-Metal) ,*  
*\* Belzona 5811 (Immersion Grade) ,*  
*\* ,*

## Problem

*A test was done to measure the metal loss of the deck and a decision was made to cut out and replace the deck. However this repair decision was deemed to be impracticable and expensive due to the probable danger of damaging equipment and objects installed below the deck.*



## Photograph Descriptions

- \* The deck before preparation. ,
- \* Belzona technician checking ambient conditions. ,
- \* Plates after initial bonding. ,
- \* Completed application protected with Belzona 5811. ,

## Application Situation

The rear section of the main deck of the ship was badly damaged by years of corrosion and wear and tear.

## Application Method

AESSEAL was asked to step in and provide a solution. We suggested our cold bonding technology for the problem. New deck plating would be bonded to the prepared deck with Belzona 1111 and the void between the old and new decks filled by injecting Belzona 1321 into the cavity. Once the plates were injected the new surface of the deck was sealed and protected with Belzona 5811. Individual plates were manufactured to fit the area of the deck to be repaired and injection/vent holes drilled through each plate. Plates were then positioned and bonded in place using Belzona 1111 to both bond and seal around all plate edges. Once Belzona 1111 was cured, Belzona 1321 was injected beneath each plate to completely fill the void between the old and new deck.

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.

[www.belzona.com](http://www.belzona.com)

  
**BELZONA**<sup>®</sup>  
Repair • Protect • Improve

## Belzona Facts

The Belzona repair which was accepted by Bureau Veritas saved the owners at least 20% of the costs associated with cutting out the old deck. More importantly, the Belzona solution was carried out without hot work, ensuring that none of the equipment installed below the deck was damaged or needed to be removed. They also saved money on the actual installation since the Belzona work was completed in less than 48 hours.

---

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.

[www.belzona.com](http://www.belzona.com)

