

Corroded Bulkhead Reinforced with Belzona

ID: 10245

Industry: Military
Application: SOS-Ships and Offshore Structures

Customer Location: Devonport, New Zealand
Application Date: April 2026

Substrate: Carbon steel
Products: Belzona 1161 (Super UW-Metal)

Problem

Localised corrosion on the bulkhead surrounding the mainmast was noticed during a routine inspection. If ignored, this issue would have led to pitting and through-wall corrosion, compromising the structural integrity of the bulkhead and leading to a lengthy removal and replacement. As the ship was not scheduled for a largescale maintenance overhaul, the client needed a fast, non-invasive solution.



Continually wet conditions surrounding the mainmast made conventional solutions impractical

Localised corrosion evident in several locations at the base of the bulkhead

Each location was prepared with a flap disc and MBX to an average of 60 microns in line with SSPC-SP11.

Steel doubler plates bonded in place and ready for painting

Application Situation

Removal of the bulkhead panels was not an option as the work would have taken weeks in dry dock at great cost in labour and materials. With the weather being so poor, conventional approaches such as welding or the use of non-surface tolerant products were not deemed acceptable. The Belzona solution was, and it was completed in 2 hours at very low cost.

Application Method

Surface preparation was carried out with pneumatic tools to SSPC-SP11, ensuring that an acceptable profile and standard of cleanliness was achieved. Steel plates were measured and cut to fit the application areas and profiled with the MBX on site. Belzona 1161 (selected due to the heavy rain and constant ingress of water into the area) was mixed and applied to the doubler plates and the bulkhead. The plates were then pressed into place and extruded material removed.

Belzona Facts

Use of conventional adhesives would have not been possible as the masthead area was continually inundated with water. Alternative solutions such as welding or replacement could only have been done in a dry dock and at greater expense.

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