

BELZONA REBUILDS AND PROTECTS CORRODED MARINE TAILSHAFT AGAINST SEAWATER CORROSION

ID: 10329



For more examples of Belzona Know-How in Action, please visit khia.belzona.com

Belzona products are manufactured
under an ISO 9001 Registered
Quality Management System.

www.belzona.com



Copyright © 1952-2026 Belzona International Limited.

PROBLEM

The marine tailshaft exhibited severe corrosion and surface deterioration after prolonged exposure to seawater, compromising the shaft surface and increasing the risk of accelerated wear and premature seal failure. The damaged areas required restoration to recover the original dimensions and provide long-term protection against further corrosion before the shaft could be returned to service.

APPLICATION SITUATION

The corroded tailshaft required restoration during scheduled maintenance to prevent further deterioration and avoid the high cost of replacement. Manufacturing or procuring a new shaft would have resulted in extended vessel downtime and increased repair expenses. Belzona was selected as a cold-applied repair solution capable of rebuilding the damaged shaft and providing long-term corrosion protection, allowing the shaft to be restored and returned to service within the maintenance schedule.

APPLICATION METHOD

The tailshaft was mounted on a lathe machine to allow controlled rotation throughout the repair process. Corrosion products and deteriorated material were removed by mechanical surface preparation, followed by thorough cleaning and degreasing to achieve a suitable substrate. Belzona 1111 (Super Metal) was applied to rebuild the corroded areas and restore the shaft profile. After machining and achieving the required surface finish, Belzona 1321 (Ceramic S-Metal) was brush-applied as a protective coating to provide long-term resistance against corrosion and environmental exposure.

BELZONA FACTS

Belzona was selected because it provided a durable and cost-effective alternative to replacing the marine tailshaft. Belzona 1111 (Super Metal) restored the corroded shaft to its required dimensions without the need for welding or thermal spraying, while Belzona 1321 (Ceramic S-Metal) formed a ceramic-reinforced protective barrier against seawater-induced corrosion. The cold-applied repair minimized downtime, reduced repair costs, and extended the service life of the tailshaft while improving reliability in marine service.

INDUSTRY

Marine

LOCATION

Navotas, Metro Manila,
Philippines

APPLICATION DATE

July 2025

PRODUCTS

Belzona 1111 (Super Metal)
Belzona 1321 (Ceramic S-Metal)

SUBSTRATE

Carbon steel

PHOTOS

1. Severe corrosion and surface deterioration on the marine tailshaft prior to restoration.
2. Overall condition of the corroded tailshaft before repair.
3. Tailshaft prepared by mechanical cleaning prior to Belzona application.
4. Belzona 1111 (Super Metal) restoration completed and protected with Belzona 1321 (Ceramic S-Metal) coating for long-term corrosion resistance

For more examples of Belzona Know-How in Action, please visit khia.belzona.com

Belzona products are manufactured
under an ISO 9001 Registered
Quality Management System.

www.belzona.com

