

Belzona Restores Seawater Cooling Pump Impeller

ID: 10016

Industry: Marine
Application: CEP-Centrifugal Pumps
Substrate: Bronze
Products: Belzona 1111 (Super Metal), Belzona 1321 (Ceramic S-Metal)

Customer Location: Durban - South Africa
Application Date: September 2025

Problem

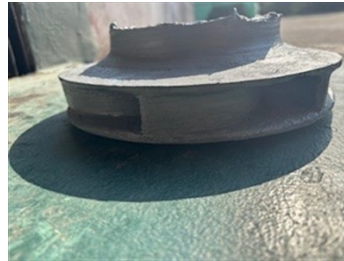
Customer had an emergency docking and sourcing a new impeller would have taken 6 to 8 weeks delivery. Impeller was severely eroded and required urgent rebuilding and coating protection from salt water as this was the vessel's sea water cooling pump.



Damaged Impeller Received From Customer.



Stainless Plates Cold bonded, Clamped And Shaped To Rebuild Lost Areas.



Metal Plates Bonded And Rebuilt On Vanes, Top And Bottom Of Impeller.



Impeller Completed And Restored.

Application Situation

The customer could not wait to source a new impeller in 6 to 8 weeks from an OEM and required urgent assistance, Belzona coating came in at a third of the price compared to a new impeller and application needed to be completed within 5 days.

Application Method

1. Received impeller, washed with SaltAway and grit blasted clean for inspection and measurement purposes.
2. Top plate made and formed to 260mm OD with ID to suit suction wear-ring OD.
3. Plate and impeller re-blasted prior to being bonded in place with Belzona 1111.
4. A further bottom plate was cut to 260 OD with an ID to suit existing out vanes.
5. Plate and impeller grit blasted and plate bonded in place with Belzona 1111.
6. Sheet metal cut and folded over to rebuild width, length and thickness for damaged vanes rebuild.
7. After blasting, the 6 new vanes bonded in position and the edges and surrounding impeller metal smoothed out with Belzona 1111 and allowed to cure.

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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8. The complete impeller was re-blasted and 2 coats of Belzona 1321 applied throughout.
9. The suction wear-ring was then over-built with Belzona 1111 for machining to correct OD by MSC Technical prior to balancing.
10. After balancing, touch-up undertaken where the balancing damaged the Belzona 1321 coating.

Belzona Facts

The Customer chose Belzona as they have chosen to protect their assets by reducing repair time and saving on repair costs.

Price of a new bronze impeller - R38750,00 (6-8 Weeks)

Belzona repair - R12500,00 (3.5 Days)

A massive costly saving.

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