Belzona Solution for Worn Pump Impeller

ID: 10162

Industry:	*Power*	Customer Location:	*Thailand*
Application:	*CEP-Centrifugal Pumps*	Application Date:	*January 2020*
Substrate:	*Carbon steel*		
Products:	*Belzona 1121 (Super XL-Metal),Belzona 1331*		

Problem

Damage surface on pump impeller caused by erosion and corrosion



Pump impeller showing damage caused by erosion and corrosion



Carbon steel surface prepared by grit blasting with steel grit to give a minimum depth of 75 microns and surface cleanliness by Swedish standard Sa 2.5



The first coat of Belona 1331



After the second coat of Belzona 1331 was fully cured, it was inspected for holidays/pinholes with a PCWI low voltage tester and successfully passed.

Application Situation

The pump impeller was disassembled and repaired in a workshop environment.

Application Method

1. Carbon steel surface on the impeller was prepared by blasting with steel grit to give a minimum average profile depth of 75 microns and Surface cleanliness to Swedish standard Sa 2.5
2. Clean and brush away any loose contaminate, cleaning with vacuum and then cleaning the surface with Methyl Ethyl Ketone.
3. Apply the first layer of Belzona 1331 at a dry film thickness of 200 microns
4. The pitted areas were rebuilt with Belzona 1121 (Super XL Metal)
5. Apply the second layer of Belzona 1331 at a dry film thickness of 200 microns
6. Check dry film thickness with PHYNIX DFT Tester
7. Check the pinhole with the PCWI low-voltage tester.
8. Before putting the pump part back to service, it required two days for the full cure.

Belzona Facts

Applying Belzona 1331 as a protective coating on pump impellers creates a durable barrier that resists erosion and corrosion caused by harsh operating conditions. This protection extends the service life of the pump, improves efficiency, reduces downtime, and lowers overall maintenance costs.

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

BELZONA® Repair • Protect • Improve

Copyright © Belzona International Limited 2026