

ONTARIO
**KNOW-HOW
IN ACTION**

BELZONA[®]
GREAT LAKES

010/2021

**MARINE
PUMP
BEARING HOUSING**


BELZONA[®]
Repair • Protect • Improve
AUTHORIZED DISTRIBUTOR

THE PROJECT

BEARING HOUSING REPAIR
JULY, 2017

A marine vessel operator in the Great Lakes was having issues with a ballast pump. Ballast pumps are used in vessels to transfer and discharge sea water to the ballast tank. The seals in the pump were severely leaking, thus reducing the pump's capability and efficiency.

Upon removal of the top casing, the pump was inspected. It was determined that the bush seating was suffering from corrosion and wear and needed to be rebuilt. The problem was that the base of the pump was mounted under the floor in the vertical position and could not be removed. The bearing housing of the pump had to be repaired in-situ.

IN-SITU REPAIR

The customer was unable to find a solution from any of their regular service trades, machine shops or marine repair facilities. None of them offered a solution that could be done in-situ without dismantling the pump.

The customer had used Belzona in the past for different repairs, so they decided to contact Belzona Great Lakes for assistance.

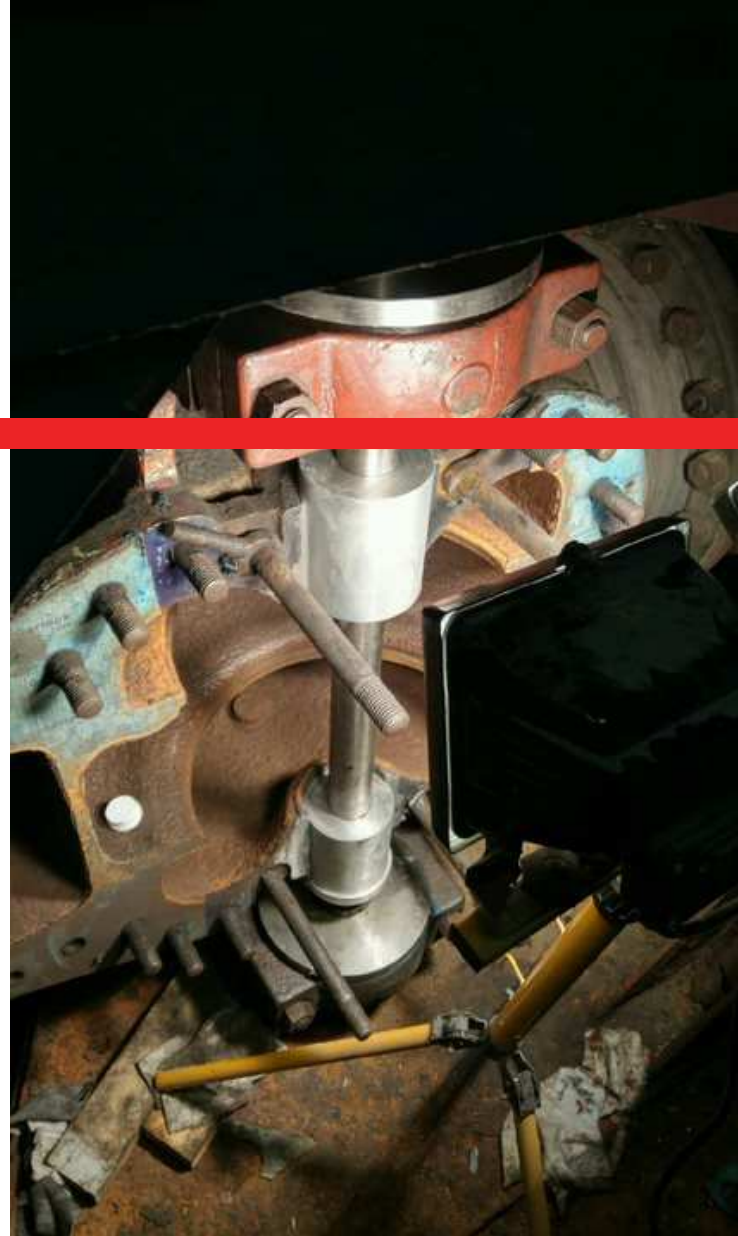


THE SOLUTION

Upon inspection of the equipment, it was recommended to rebuild the bearing housing using Belzona's forming technique. The repair consist of forming a Belzona repair material using formers. Such formers are usually pre-fabricated considering the dimensions of the equipment being repaired. The repair can be carried out in situ without the need for specialty equipment or hot work permits.

In this case, a light weight former was pre-fabricated, which was coated with Belzona 9411 (Release agent) to allow for easier disassembly once the rebuilding material has cured.

NO HOT WORK REQUIRED



The damaged area was manually ground and cleaned prior to the application of the rebuilding material. Belzona 1121 (Super XL-Metal) was used as the rebuilding material. The product was mixed and applied over the damaged area and then the former was pressed against the product to achieve the desired dimensions. The former was removed after the product was fully cured.

Belzona 1121 (Super XL-Metal) is a paste grade 100% solid epoxy material. The product can be used for multiple purposes such as bonding, shimming, rebuilding, wrapping, patching to name a few. The product will not shrink while curing, so it allows to achieve exact dimensions and geometries when necessary.