

ONTARIO  
**KNOW-HOW  
IN ACTION**

**BELZONA**<sup>®</sup>  
GREAT LAKES

017/2021

**HYDROPOWER  
TURBINE CASE  
END RING SEALING**

  
**BELZONA**<sup>®</sup>  
Repair • Protect • Improve  
AUTHORIZED DISTRIBUTOR

# THE PROJECT

END RING SEALING  
OCTOBER, 2020

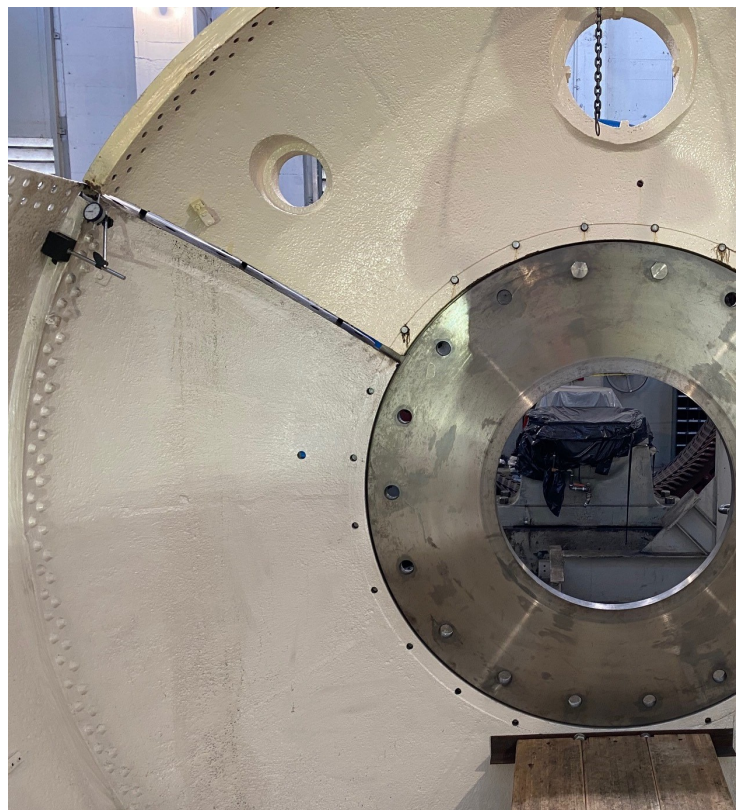
A Hydroelectric plant in Northeastern Ontario was assembling a turbine case. The turbine case had a top and bottom section. When both sections were installed, there was a gap between the mating flanges. In the past they had used a casting material but was lead base.

The customer needed a new casting material that would not only be able to seal the gap but also be able to withstand 45 feet of head pressure while in service.

## CHOCKING MATERIAL

The company had used Belzona materials in the past, so they studied the Belzona product line to see which product would be suitable for this application. They decided to use Belzona 7111 (Marine Grade), which was later confirmed by their local Belzona consultant to be the correct choice..

Belzona engineering team was able to replicate the application setup and do a demonstration for the hydroelectric trades team on how to complete the product application successfully.

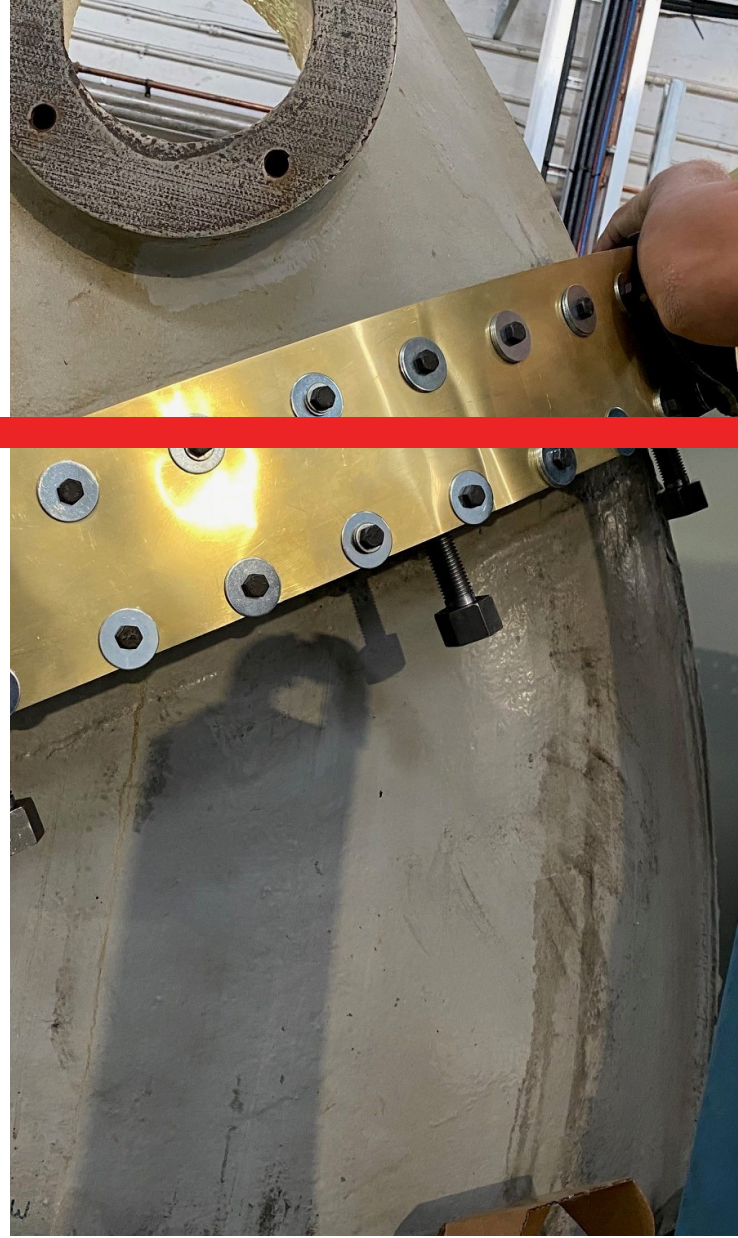


# THE SOLUTION

Belzona 7111 (Marine Grade) is a two component 100% solids epoxy system that is used for chocking, casting, levelling and shimming applications. The product exhibits nearly no shrinkage which helps ensure a perfect seal between both mating surfaces.

A mold was fabricated for the application and Belzona 9411 (Release Agent) was applied to it. Release agent was also applied to the top section of the turbine case so they will be able to remove whenever inspection/maintenance was necessary.

## NO SHRINKAGE



Once the mold was set in place Belzona Belzona 7111 (Marine Grade) was mixed and then poured into the mold. Once the Belzona 7111 (Marine Grade) was fully cured, the mold was removed and the sharp edges were sanded.

**Belzona 7111 (Marine Grade) exhibits excellent non-shrinking properties, high impact, and compression strength. The product flows easily into the application area conforming to irregularities and filling voids to create a perfect seal or chock.**