

ONTARIO
**KNOW-HOW
IN ACTION**

BELZONA[®]
GREAT LAKES

011/2021

**WASTEWATER
PUMP
EROSION PROTECTION**



BELZONA[®]
Repair • Protect • Improve
AUTHORIZED DISTRIBUTOR

THE PROJECT

PUMP COATING
SEPTEMBER, 2015

Pumps are under the constant threat of erosion and wear as they handle large quantities of liquid throughout their working day. Entrained solids can damage pump elements and casings can be eroded by constant water flow and corroded by chemicals, sewage and other materials involved in the treatment process.

Long lead times from manufacturers often means that an out of service pump can cause lengthy delays and shutdowns and outright replacement is often prohibitively expensive

EROSION & CORROSION PROTECTION

In Toronto, a leading provider of fluid transfer equipment wanted to provide a new pump to a client that would provide long service in a municipal wastewater system and resist the effects of erosion and corrosion.

Previous supplied pumps had not met the customers expectations of longevity due to the impeller and volute being worn away by the erosion caused by wastewater.



THE SOLUTION

Belzona 1331 was specified for this application. This product offers excellent erosion and corrosion protection for systems operating under continuous immersion.

The pump volute and impeller were masked off to protect machined surfaces and areas not requiring coating. The surface was then abrasive blasted to the required standard. The Belzona 1331 was applied as a two coat system. The first coat (Grey) was applied by brush at a DFT of 15 mils (375 Microns), followed by a second coat (white) also applied by brush at a DFT of 15 mils (375 microns).

SOLVENT FREE



The additional cost of adding a protective coating to the volute and impeller was more cost effective than changing the substrate to an exotic alloy. The client was familiar with Belzona having used other Belzona coatings on other pumps. As the end user wanted to extend the life of an unprotected pump, the erosion resistance test data of 1331 and ease of application gave the client confidence that this was a long term solution.

Belzona 1331 offers excellent erosion whilst benefitting from being spray friendly. Having a 24-hours overcoating window, the two-coat system allows for large applications to be quickly completed, reducing downtime.