

ONTARIO
**KNOW-HOW
IN ACTION**

BELZONA[®]
GREAT LAKES

001/2021

**WASTEWATER
CENTRIFUGE
BOWL PROTECTION**


BELZONA[®]
Repair • Protect • Improve
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THE PROJECT

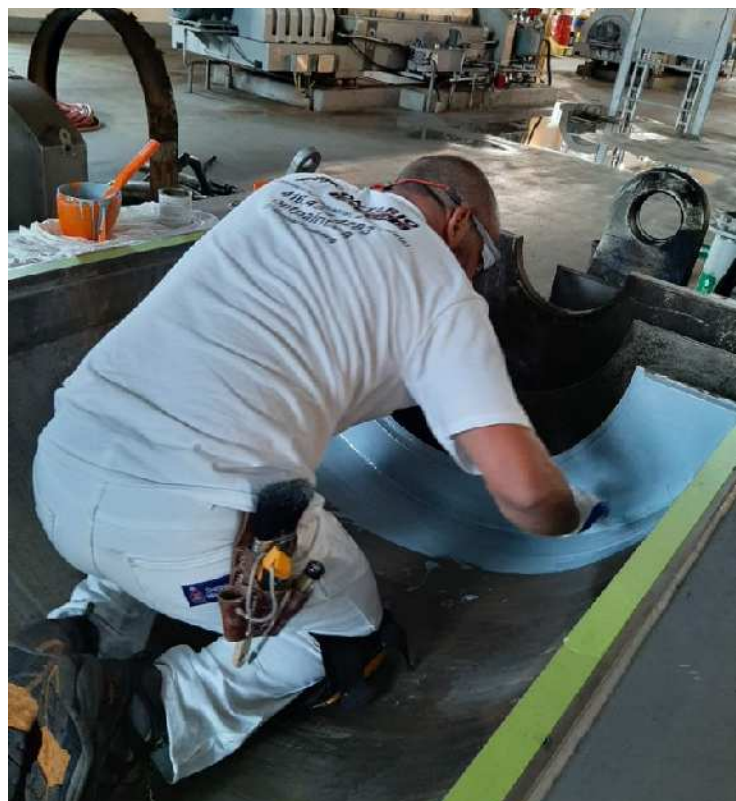
DECANTER CENTRIFUGE
SEPTEMBER, 2020

The WPCP of Duffin Creek is a traditional activated sludge plant for the treatment of wastewater and sewage sludge collected from the York Regional Municipality and the Durham Regional Municipality. In the city of Pickering, on the shores of Lake Ontario, the wastewater treatment plant is located.

This plant processes approximately 80% of the waste generated by residents and commercial premises of the Regional Municipality of York and all the residents and commercial premises of the Town of Ajax and the City of Pickering in the Regional Municipality of Durham.

CORROSION & EROSION

Receiving media from the anaerobic digester, the biosolids are then dewatered using a series of decanter centrifuges. Along with erosion-corrosion to the metal, the system can suffer from a scale build-up. Struvite is known to cause problems in the areas of anaerobic digesters and centrifuges. Struvite formation can cause problems for the pumps pumping digested biosolids through the dewatering process



THE SOLUTION

The steel substrate was prepared to and in accordance with SSPC-SP 11, Bare Metal Power Tool Cleaning. This method of surface preparation was chosen as the plant was in operation and abrasive blasting was not an option.

Once the substrate was prepared, Belzona 1111 Super-Metal was applied as a stripe coat to smooth out any defects, joints and seams.

IMPROVED EFFICIENCY



Belzona 1341 (Supermetalglide) coating was applied in two coats of alternate colors (Grey & Blue), this will protect the substrate from erosion-corrosion, reduce scaling and improve efficiency in the decanter centrifuge. Since the application was completed, additional units have also been coated.

Belzona 1341 (Supermetalglide) improves equipment efficiency by using hydrophobic technology to repel process fluids and reduce turbulent flow. Efficiency increases of up to 7% have been recorded on new equipment and up to 20% on refurbished equipment. This coating is suitable for contact with potable water as it is certified to NSF/ANSI Standard 61.