

Belzona 1341 provides a non-stick coating to pump

ID: 8265

Industry: Water / Wastewater
Application: CEP-Centrifugal Pumps
Substrate: Steel
Products: * Belzona 1341 ,

Customer Location: Hungary
Application Date: 2016

Problem

Clogging in pumps due to the high content of Struvite (aka MAP - magnesium-ammonia-phosphate) in wastewater. MAP is an alkali with PH9 so it is a corrosive agent as well. "Struvite can be a problem in sewage and waste water treatment, particularly after anaerobic digesters release ammonium and phosphate from waste material. Struvite can form a scale on lines and belts, in centrifuges and pumps, clog system pipes and other equipment including the anaerobic digester itself. Struvite, also referred to as MAP, forms when there is a mole to mole to mole ratio (1:1:1) of magnesium, ammonia and phosphate in the wastewater. Having struvite scale in a wastewater treatment system can lead to great inefficiency within the plant or operation due to clogging of the pipes, pumps and equipment. There have been a few options to solve this issue, including replacing the pipes, or using a hydro-jetter or a mechanical grinder to clear them. But many lines can be underground and either of these options implies considerable downtime and labor."



Photograph Descriptions

- * MAP residue in pump inlet ,
- * Cleaned impeller ,
- * 1341 applied ,
- * After 2 years in service there is only cleaning and refurbishment of the coating is needed. ,

Application Situation

Once we promoted Belzona 1341 to a water and wastewater plant in Hungary. They complained about subsidence and clogging in their fluid handling system. We suggested to send the pump to our workshop and test the performance of Belzona 1341. No sign of subsidence was noticed after 2 Months of operation.

Application Method

A thorough removing of clogged material followed by salt removal washing process and blasting to achieve the right cleanliness and

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roughness of the surface. Belzona 1341 Supermetalgilde was applied in 2 layers according to the instruction for use and Belzona System Leaflets CEP-3/CEP-10

Belzona Facts

The clogging was a problem in every 2-3 weeks. Application made in 2016. The pump came back for re-coating after 2 years continuous service. Belzona 1341 is in a good condition except some damages due to the mechanical cleaning by operators. The plant saves a lot of money and downtime as they need only 3 days in every other year to re-coat the pump.

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