

IMPELLER RESTORATION WITH BELZONA KEEPS BIOMASS PRODUCTION ONLINE

ID: 7482

Industry: Power
 Application: CEP-Centrifugal Pumps
 Substrate: Steel
 Products: * Belzona 1311 (Ceramic R-Metal) ,
 * Belzona 1321 (Ceramic S-Metal) ,

Customer Location: Bio-engineering Company, Portugal
 Application Date: 2014

Problem

As part of their operations, they needed to restore three damaged pump impellers. In order to eliminate the growth of any microbiological matter which could affect the algae's development or quality, the producer uses strong chemicals to clean the process equipment. Each pump is cleaned every one to two weeks. The frequency of this cleaning had resulted in the pump impellers becoming damaged after just one year in service.



Photograph Descriptions

- * 1. Three impellers damaged in 2014 ,
- * 2. Grit blasted impeller highlights the extensive damage ,
- * 3. Shape restored using wire mesh and Belzona 1311 ,
- * 4. Impellers still in perfect condition in 2017 ,

Application Situation

Company focuses on the production of algae for a variety of different purposes, including biomass and biofuel generation.

Application Method

Application completed in accordance with Belzona System Leaflet CEP-1 and CEP-3. The eroded impeller design was rebuilt using a combination of wire steel mesh and Belzona 1311. Once the shape was restored, the impellers were coated using Belzona 1321 to protect form further damage.

Belzona Facts

For more examples of Belzona Know - How In Action, please visit <https://khia.belzona.com>

ISO 9001:2015
 FS 695214
 ISO 14001:2015
 EMS 695213

Belzona products are
 manufactured under an ISO
 9000 Registered Quality
 Management System.

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BELZONA
 Repair • Protect • Improve

In 2017, the pump impellers were revisited and found to still be in perfect condition after two and a half years of service. Compared to the short lifespan and excessive damage when unprotected, the Belzona coating improved the longevity of the component significantly. Due to the overwhelming success of these applications, Belzona has been chosen to coat four new impellers in 2017.

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