

# IMPELLER RESTORATION WITH BELZONA KEEPS BIOMASS PRODUCTION ONLINE

ID: 7482

Industry: Power Customer Location: Bio-engineering Company, Portugal

CEP-Centrifugal Pumps Application Date: 2014

Substrate: Steel

Application:

Products: \* Belzona 1311 (Ceramic R-Metal),

\* Belzona 1321 (Ceramic S-Metal),

#### **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 Belzona products are
FS 695214 manufactured under an ISO
ISO 14001:2015 9000 Registered Quality
EMS 695213 Management System.

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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.
For more examples of Reizona Know - How in Action, please visit https://khia.heizona.com

