

Hydro Power Kaplan Turbine Case Coated with Belzona

ID: 8544

Industry: Fluid Flow

Customer Location: Austria

Application: CEP-Centrifugal Pumps

Application Date: November 2020

Substrate: Steel

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

* Belzona 1321 (Ceramic S-Metal) ,

Problem

The impeller shell of the Kaplan turbine at a Hydro power plant was badly damaged by cavitation and wear over several decades.



Photograph Descriptions

- * Image 1: The turbine casing after sandblasting. ,
- * Image 2: Before the reconstruction, a template of the target shape was made. ,
- * Image 3: Belzona 1311 applied to rebuild the profile. ,
- * Image 4: Complete with a top layer of Belzona 1321 ,

Application Situation

Kaplan Turbine was badly damaged by cavitation and wear over several decades.

Application Method

Blasted to 90µm roughness according to Testex with abrasive Asilikos 0.2-1.4 (carried out by Bauschutz) Residual moisture burned out of the casting Flaws slightly raised and rebuilt with Belzona 1311 - curing: 18 hours at 15 ° C Reconstructed areas ground to the target contour Swept jacket - Belzona 1311 spots were slightly roughened and bare steel surfaces were derusted Coating of the jacket with two layers of Belzona 1321 - the first layer was completely covered within 2 hours - total target layer thickness: 600 µm Applications carried out in line with Belzona system leaflet CEP-5

Belzona Facts

No specialist equipment was required and a fast return to service.

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

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