

HYDRO POWER KAPLAN TURBINE CASE COATED WITH BELZONA

ID: 8544



PROBLEM

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

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.

INDUSTRY

Fluid Flow

LOCATION

Austria

APPLICATION DATE

November 2020

PRODUCTS

Belzona 1311 (Ceramic R-Metal)
Belzona 1321 (Ceramic S-Metal)

SUBSTRATE

Steel

PHOTOS

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

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