

HYDRO POWER KAPLAN TURBINE CASE COATED WITH BELZONA

CUSTOMER

Austria

APPLICATION DATE

Nov-20

APPLICATION SITUATION

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

PROBLEM

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

PRODUCTS

Belzona 1311 (Ceramic R-Metal)

Belzona 1321 (Ceramic S-Metal)

SUBSTRATE

Steel

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.

PICTURES

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



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