

BELZONA REPAIRS AND PROTECTS HYDROELECTRIC TURBINE AND CASING

ID: 2202



PROBLEM

Both turbine and casing suffered from severe erosion corrosion when operating in both pumped storage and electricity generation mode.

APPLICATION SITUATION

Hydroelectric pumped storage turbine and casing

APPLICATION METHOD

Application was carried out in accordance with Belzona Know-How System Leaflets CEP-3, CEP-5 & SHM-11. The application was carried out on a platform built on the ground floor, which provided more space and a more controlled application environment. Belzona® 1321 was applied to protect from future erosion corrosion damage. Within localised problem areas, a number of different systems were used. Belzona® 1812 was applied to the stay vanes' leading edges for protection from entrainment erosion in pumping mode, and Belzona® 2141 on the stay vanes' leading edges in turbine mode to protect from cavitation with Belzona® 1341 being used in the middle section.

BELZONA FACTS

Thanks to the use of various Belzona systems in localised areas, a number of different problems could be addressed, demonstrating the versatility of Belzona products. Inspection in June 2012 showed all application areas to be in excellent condition with no evidence of corrosion or erosion on the different application areas.

INDUSTRY

Power

LOCATION

Major European electricity operator, Aguieira, Portugal

APPLICATION DATE

May 2010

PRODUCTS

Belzona 1111 (Super Metal) Belzona 1321 (Ceramic S-Metal) Belzona 1812 (Ceramic Carbide FP) Belzona 2141 (ACR-Fluid Elastomer)

SUBSTRATE

Carbon Steel

PHOTOS

Turbine disassembly Pit filling on the turbine with Belzona 1111 Application of Belzona 1812 after coating the entire stay vane with Belzona 1341 Completed application of Belzona 2141

For more examples of Belzona Know-How in Action, please visit khia.belzona.com

Belzona products are manufactured under an ISO 9001 Registered Quality Management System.

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