# **BELZONA REPAIR & PROTECTION OF FRANCIS TURBINE RUNNERS**

Industry:	Power	Customer Location:	Hydroelectric power plant, Barcelona, Spain
Application:	CEP-Centrifugal Pumps	Application Date:	November 2011
Substrate:	Steel		
Products:	* Belzona® 1111 (Super Metal) Belzona® 1341 (Supermetalglide) ,		

#### Problem

The turbines were suffering from corrosion and erosion cavitation damage in the runner blades which caused holes.



### **Photograph Descriptions**

\* Damaged turbine Close-up of the damage Belzona<sup>®</sup> 1111 used in combination with a metallic mesh Application completed with Belzona<sup>®</sup> 1341 ,

### **Application Situation**

Three Francis turbines severely damaged.

### **Application Method**

The application was carried out in accordance with the Belzona Know-How System Leaflets CEP-1, CEP-3 and CEP-5. Firstly, the holes and metal losses were repaired with Belzona<sup>®</sup> 1111 combined with a metallic mesh tobridge and strengthen the holed areas. Once the damaged areas had been repaired, the turbine runners were completely coated with Belzona<sup>®</sup> 1341.

## **Belzona Facts**

The client has been doing this type of repair and coating application on his Francis turbines for more than 30 years using Belzona products. Therefore, no alternative repair was considered. The application was completed within one week, ensuring the client could continue to supply electricity to their customers with minimal disruption.

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

Belzona products are manufactured under an ISO 9000 Registered Quality Management System.

www.belzona.com



ID: 3645