

# BELZONA PROVEN PROTECTION OF STEAM TURBINE

ID: 1290

Industry: Power

Customer Location: Vladimirsky Power Plant/ Russia

Application: CEP-Centrifugal Pumps

Application Date: July 2003

Substrate: Steel/Cast iron

Products: <div>Belzona® 1111 (Super Metal)</div><div>Belzona® 1391 (Ceramic HT Metal)</div>

## Problem

After more than 35 years (253.000 hours) in-service, inspection during shutdown in 2003, revealed that turbine faced severe stream erosion caused by humid steam. Damages were up to 8 mm wide and 10 mm deep.



## Photograph Descriptions

\* Grit blasting underway , \* After blasting extent of damage clearly evident , \* Application of Belzona® 1391 , \* Completed job ,

## Application Situation

Diaphragm and channels under the end journal of medium pressure steam turbine.

## Application Method

Application was carried out in accordance with a modified version of Belzona Know-How System Leaflets CEP-3 & -5.

## Belzona Facts

After 5 years in-service turbine has been inspected (July 2008) and results were very satisfactory. Channel around the nozzle blades had been preserved 95-100%. Also Belzona® 1391 on the rebuilt areas was practically undamaged. In a zone of phase transition, minor damages were easily repaired.

Testimonial from client expressed complete satisfaction and further use of Belzona planned on other stages of the turbine.

For more examples of Belzona Know - How In Action, please visit <https://khia.belzona.com>

ISO 9001:2015

Belzona products are

FS 695214

manufactured under an ISO

ISO 14001:2015

9000 Registered Quality

EMS 695213

Management System.

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