

# FOUR BELZONA REPAIRED CONDENSERS STILL IN SERVICE AFTER 17 YEARS

ID: 1634

**Industry:** Buildings & Structures  
**Application:** CEP-Centrifugal Pumps  
**Substrate:** Carbon steel  
**Products:** \* Belzona® 1311 (Ceramic R Metal) ,  
\* Belzona® 1321 (Ceramic S Metal) ,

**Customer Location:** Power station, Thailand  
**Application Date:** October 1993

## Problem

Corrosion pitting had occurred around the tubes as a result of bi-metallic corrosion effects and the chloride content of the used river water.



## Photograph Descriptions

- \* Corroded tube sheet before application in 1993 ,
- \* Standard application underway. Special care was taken to prevent contamination of substrate) ,
- \* Inspection in 2005 ,
- \* Inspection in 2010 ,

## Application Situation

Four main condensers with a total of eight tube sheets

## Application Method

The application was carried out in accordance with the Belzona Know-How System Leaflet HEX-1. Belzona® 1311 was used for rebuilding and Belzona® 1321 for the coating of the tube sheets.

## Belzona Facts

Since the application of the coating, regular inspections took place which proved the excellent performance of the Belzona coating. In 2005, the complete coating of the tube sheet was still intact without showing any signs of degradation. A further inspection in 2010, after 17 years in service, also showed that the coating was still in a good condition. Only 10% of the surface was locally

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ISO 9001:2015  
FS 695214  
ISO 14001:2015  
EMS 695213

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

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damaged due to mechanical damage. These areas were quickly repaired with Belzona before the tube sheet was put back into service.

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