

# BELZONA PREVENTS GALVANIC AND CREVICE CORROSION ON A RUDDER HORN

ID: 23

Industry: *Marine*  
Application: *SOS-Ships and Offshore Structures*

Customer Location: *Oil shipping company*  
Application Date: *1988*

Substrate: *Carbon Steel and Bronze*  
Products: *\* Belzona® 1321 (Ceramic S-Metal) ,*  
*\* Belzona® 1211 (E-Metal) ,*

## Problem

*Corrosion of internal of Rudder Horn had allowed the press fitted bronze bearing to become free. Bearing was approximately 908mm (36-inch) diameter and 1050mm (41-inch) long.*



## Photograph Descriptions

- \* Belzona materials and team prepared for application. ,
- \* Internal shot of bearing. Note arrows for injection ports. ,
- \* Bearing after injection and prior to cleaning up of the Belzona® 1211 seal. ,

## Application Situation

Corrosion to internal of rudder horn of 280,000 Ton VLCC (Very Large Crude Carrier) required re-fixing of bearing.

## Application Method

The bearing was aligned and its position in the housing fixed using alignment bolts. The top and bottom of the housing were sealed using Belzona® 1211, then Belzona® 1321 was injected from below into the space behind.

## Belzona Facts

This method is used both in new-build and repair, and this example illustrates the ability to undertake this work while the vessel is afloat. Use of the Belzona materials isolates and permanently fixes the bearing into position preventing galvanic and crevice corrosion.

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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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