

# Refurbishment of Vertical Pump Suction Bells Using Belzona for Protection Against Saltwater Exposure

ID: 10011

Industry: Oil & Gas  
Application: CEP-Centrifugal Pumps  
Substrate: Cast Iron  
Products: Belzona 1111 (Super Metal), Belzona 5821

Customer Location: Saudi Arabia  
Application Date: April 2024

## Problem

The supports and flow straighteners on the suction bell were heavily corroded and eroded due to prolonged exposure in seawater service.



The suction bells exhibit severe corrosion and erosion as a result of prolonged exposure to saltwater.

Suction bells deteriorated by severe saltwater corrosion and erosion

Suction bells repaired with Belzona 1111 (Super Metal) and overcoated with Belzona 5821

Belzona 5821 overcoat applied to protect equipment operating in immersed conditions

## Application Situation

The suction bell was fully corroded and eroded especially at the support areas.

1. The worn-out metal at the support/flow straightener areas were rebuilt with Belzona 1111 (Super Metal) and reinforcement sheet.
2. The rebuilt sections and the remaining surfaces were overcoated with Belzona 5821 to enhance durability under immersed operating conditions.

## Application Method

Belzona 1111 (Super Metal) was applied to rebuild all pitted areas. For heavily worn areas at the supports/flow straighteners, additional reinforcement sheet was installed to strengthen the repair. The suction bell was subsequently top coated with Belzona 5821 for long term immersion protection in seawater service.

## Belzona Facts

Although the suction bell was beyond repair using conventional methods, the implemented Belzona solution successfully prevented

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

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