

# Refurbishment of Damaged Oil Strainer Using Belzona

ID: 10164

Industry: Oil & Gas  
Application: CEP-Centrifugal Pumps  
Substrate: Cast Iron  
Products: Belzona 1111 (Super Metal), Belzona 3921 (GSC Surface Conditioner), Belzona 4341 (Magma CR4), Belzona 5111 (Ceramic Cladding)

Customer Location: Al Khafji  
Application Date: January 2025

## Problem

An oil–water strainer operating at ambient temperature with an acidic pH had suffered severe internal erosion. This resulted in through-wall defects and active leaks, creating significant safety concerns and risking unplanned shutdown.



Initial condition of strainer

Surface preparation conducted via grit blasting

Application in progress using Belzona 1111 (Super Metal) to rebuild and install patch plates for through-wall defects. Belzona 4341 (Magma CR4) was applied for internal protection.

External UV protection provided by the Belzona 5111 (Ceramic Cladding) coating

## Application Situation

Welding was not considered a viable option due to the localized nature of the damage and the condition of the parent metal. As a result, the client was considering scrapping the equipment and replacing it entirely, leading to high cost and extended downtime.

## Application Method

1. Both the internal and external surfaces of the oil–water strainer were grit blasted to Sa 2.5 cleanliness, achieving a minimum surface profile of 75 microns, in accordance with the Belzona Instructions for Use (IFU).
2. The through-wall defects were sealed using a patch plate that was cold bonded to the casing. The internal geometry of the strainer was then rebuilt using Belzona 1111 (Super Metal).

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

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3. Following the repair, the internal surfaces were protected with Belzona 4341 (Magma CR4), applied in two coats to achieve a minimum dry film thickness (DFT) of 750 microns.

4. The external surfaces were subsequently protected with Belzona 5111 to provide long-term corrosion and UV protection.

### Belzona Facts

The Belzona repair and protection system successfully restored the operational integrity of the oil-water strainer, allowing it to be returned to service quickly. This solution eliminated the need for equipment replacement, minimized downtime, and delivered significant cost savings for the customer.”

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