# Refurbishment of Damaged Oil Strainer Using Belzona

*ID: 10164*

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| Industry: | *Oil & Gas* | Customer Location: | *Al Khafji* |
| Application: | *CEP-Centrifugal Pumps* | Application Date: | *January 2025* |
| Substrate: | *Cast Iron* | | |
| Products: | *Belzona 1111 (Super Metal),Belzona 3921 (GSC Surface Conditioner),Belzona 4341 (Magma CR4),Belzona 5111 (Ceramic Cladding)* | | |

### 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).



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FS 695214
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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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