

Belzona Restores a Cone Shaped Cyclone Separator

ID: 10137

Industry: Chemical & Petrochemical
Application: CEP-Centrifugal Pumps
Substrate: Carbon steel
Products: Belzona 1311 (Ceramic R-Metal), Belzona 1381, Accessories

Customer Location: Greater Houston, TX
Application Date: June 2025

Problem

The customer had a cyclone separator that constantly vibrates to separate solids inside. The process over time eroded the metal and created through wall defects. The cost & time for a replacement was not feasible. Weld repair was not possible because the asset had thin metal and a unique geometry. The customer was looking for a cost effective solution that allowed a quick return to service.



Before image of a flange and externals

Pin holes found after blasting

External repair completed on the top nozzle piece

External repair completed on the main body of the separator

Application Situation

The Belzona solution offered a quick return to service and our ceramic filled products should improve the efficiency of the separator. Sealing the holes in the asset will create a safer work environment, now that the asset will not be leaking. Our solution was completed in two days over a weekend, allowing them to be up in running by Monday morning. The repair was cost effective and refurbished their asset, allowing them to get more life out of it. This saved them downtime and replacement costs.

Application Method

1. The asset was sent to our shop for work to be done over a weekend.
2. The asset was abrasive blasted to SSPC-SP10 standard and wiped clean with Belzona 9111 degreaser.
3. Belzona 1311 paste was applied to plate bond over any through wall defects, pit fill, and smooth welds as needed.
4. Belzona 1311 was applied by hand to rebuild the flange faces to create a flat surface. After dimensionally stable, the 1311 was sanded flush best effort.
5. Belzona 1381 was applied in a two coat system to the internals of the asset.
6. Belzona 1381 was applied with 9341 mesh to composite wrap the bottom 24" externally, and the top nozzle.
7. Visual inspection and touch ups completed. Product was allowed to cure, and returned to customer.

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

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

www.belzona.com



Belzona Facts

Belzona is trusted by this customer for our ability to get them quick fixes in a pinch that improve their assets. Our products don't just fix their problems, they improve efficiency and allow them to save money on downtime and replacement. Having a turn key contractor and Belzona products in town stocked for emergencies, add value to the process.

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