

STRUCTURAL REINFORCEMENT OF NOZZLE WITH BELZONA SW II

CUSTOMER

Sao Paulo, Brazil

APPLICATION DATE

December 2018

APPLICATION SITUATION

Nozzle of process vessel suffering from internal corrosion and significant thickness loss. A carbon fiber polymeric compliant repair was needed, to comply with the structural reinforcement design of the equipment, and allowing for its operational continuity and reliability.

PROBLEM

Nozzle welded to the bottom of the tank showing accelerated signs of internal corrosion. Fluid: Oxygen Scavenger Pressure: 1 kg/cm² Temperature: 26°C Original Wall Thickness: 8.7mm Final Wall Thickness: 4mm

PRODUCTS

Belzona 1311 (Ceramic R-Metal)

Belzona 1982 (Superwrap II)

Belzona 9381 (Carbon Fiber Reinforcement Mesh)

Belzona 9382 (Release Film)

SUBSTRATE

SA516 Gr 70

APPLICATION METHOD

Surface preparation was performed in accordance with SSPC SP11 with a MBX, achieving the required surface roughness for the application. After surface cleaning to get rid of oil and contamination, Belzona 1311 was used to bond a metallic coupler. The Belzona Superwrap II system was then applied around the nozzle and in part of the tank wall, with a final thickness of 6mm.

BELZONA FACTS

Application performed on site with certified Belzona applicators in accordance with ASME PCC-2. By restoring the structural integrity of the equipment with a non-metallic repair the end user was able to save on a lot of labor and safety of its employees.

PICTURES

1. Overall view of finished repair
2. Overall view of finished repair
3. Overall view of finished repair
4. Close-up view with metallic id tag



1.



2.



3.



4.

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