

Challenge

Issue

Tank roof had holes due to corrosion. Structural repairs were needed to maintain integrity of tank roof.

Goals

Repair existing holes and reinforce worn areas without the need to take the tank out of service. Safely repair hydrocarbon containing tank without welding.

Root Cause

High sulfur level in oil resulted in corrosive SO₂ gas which reacted with humidity in tank and formed H₂SO₄, which corroded tank.



Before: Damaged tank roof.

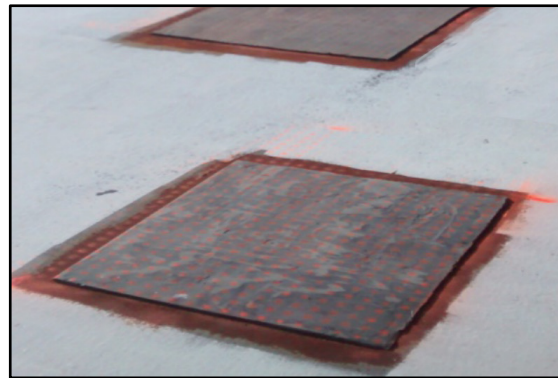
Solution

Preparation

- Roughen up decontaminated surfaces areas to be coated.
- Blast metal plates to a NACE 2.

Application

1. Metal plates were cold-welded onto the roof using ARC 858.
2. Expanded metal mesh embedded within the ARC 858 coating for additional structural support.



In progress: Metal plates cold welded with ARC 858.

Results

Client Reported

Client was extremely satisfied as they were able to conduct the repairs without having to take the tank down completely.

Return on Investment

Cost of taking tank out of service and conducting structural repairs	\$969,000
ARC repair and labor	\$325,000

Net Savings:	\$644,000
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\$ = USD



After: Finished repairs and top coated external of tank roof.