Protecting a 38-Foot-Diameter Storage Tank Floor with ZERUST® Zerion® FAN-6

ZERUST® Zerion® FAN-6 Corrosion Inhibitor Powder

1. PROJECT OVERVIEW

Client	Major U.S. petroleum refiner		
Industry	Refining & Petrochemical, Terminals & Storage	**Application Type**	Tank Bottom Protection
Year	2023	**Location**	Illinois, United States

Project Summary

An out-of-service aboveground storage tank at a refinery was having its floor replaced, leaving the original floor removed and the sand foundation exposed. ZERUST Integrity Solutions® top-dressed ZERUST® Zerion® FAN-6 corrosion inhibitor powder onto the sand bed so the underside of the new tank floor would be protected from corrosion once installed. Rain halted work after a portion of the bed was treated; the area was covered with a metal sheet and the installation team was to complete the remainder before the new floor was set.

Project Photos



ZERUST® Zerion® FAN-6 powder being top-dressed onto the exposed sand bed



Powder applied across the sand bed



Metal sheet placed over the treated area

2. ASSET AND SITE DETAILS

General

Asset type	Aboveground storage tank
Service status	Out of service (floor under replacement)
Number of bottoms	Single
Foundation details	4-in. sand bed with liner, no slope
Diameter	38 ft
Weather / environment	Cloudy with rain, approx. 35 °F, 70% humidity

3. SOLUTION IMPLEMENTED

ZERUST® Products Used

- ZERUST® Zerion® FAN-6 Corrosion Inhibitor Powder – 4 pails supplied – top-dressed over the exposed sand bed beneath the new tank floor

Implementation Details

- **Preparation / inspection:** The original tank floor had been removed for replacement before the crew arrived, leaving the sand base exposed; the tank roof was also not in place.
- **Installation method:** Top-dress application: the powder was loaded into a spreader and distributed evenly over the sand bed at approximately 400 g/m².
- **Challenges and solutions:** Rain halted work after a portion of the sand bed was treated. A metal sheet was placed over the treated area before the team left site, and the installation team was to finish the application once the weather cleared. No other significant problems arose.

4. OUTCOME SUMMARY

Results

- ZERUST® Zerion® FAN-6 was applied to part of the sand bed before rain halted operations, and the treated area was covered with a metal sheet. The installation proceeded without significant problems.

Next Steps

- The installation team was to complete the application over the remaining sand base once the weather cleared.
- Once the inhibitor was evenly spread, the new tank floor was to be installed.
- ZERUST Integrity Solutions® recommended also sealing the chime area with polyurethane construction adhesive at that time.