

## Corrosion Protection for a Single Bottom Storage Tank on a Rocky Gravel Foundation via Internal Flood IDS

### Project Specifics

Installation Dates  
November 15-23, 2020

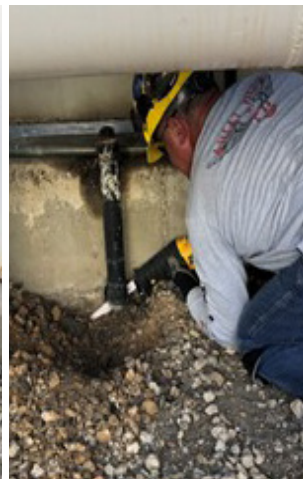
Location  
Texas, USA

Environmental Conditions  
88°F, ~80% humidity, hot and sunny with some clouds

Asset Details  
Diameter: 143-ft  
Vessel Construction: Single-Bottom with a liner and without a Concrete Ring Wall.  
Foundation Media: Rocky/Gravel ~4 inch Depth

Inhibitor Delivery System (IDS)  
Internal Flood IDS with  
IDS Sealant & Monitoring Systems

Zerust Product(s) Used  
Zerion® FVS Corrosion Inhibiting Powder



#### Project Specifics

The client wanted corrosion protection for an aboveground storage tank on a rocky, gravel foundation with existing liner, no concrete ring wall, no anchor bolt(s), and three ports.

#### Zerust Solution

The engineers at Zerust® Oil & Gas developed custom solutions for this client and successfully installed an IDS sealant system around the chime area of the targeted assets and completed the injection of the corrosion inhibiting solution slurry on the tanks Zerust Monthly Marketing Newsletter using Zerust's Internal Flood IDS along with the installation of ER probes for IDS monitoring.

#### Tank Project Details

##### Preparation

The team dug out small areas of gravel/clay around existing old ports, which were replaced by Zerust Electric Resistance (ER) Probe assembly port connection on all three (3) trench channels at a 90-degree incline. Wire brushing was performed on the

#### Installation

Sikaflex adhesive was applied on the circumference of the tank and sealed due to high gaps between the upper surface of the concrete area and the chime ring base area. PVC pipes were assembled and installed in ports through the (3) ring wall locations. Each port is connected to a trench that goes to the center of the tank foundation. Port assemblies were connected to the old ports which were cut and connected at the base of the trench wall for installation of ER probes. FVS Inhibitor was injected through the floor plate ports inside the tank using garden hose and submersible water pump. The application was continually done through all four (4) welded ports in the tank. Inhibitor injection was pumped/injected using a submerging pump and four (4) 100ft hoses connected through the entrance of the tank.

#### Conclusion

The installation was successfully completed. It is recommended that data should be recorded (min.) once a week for three (3) months post VCI application. After which this frequency can be reduced to once a month.