

Corrosion Protection for a Diesel Out-of-Service Storage Tank with Liner, CP System, and Concrete Ring Wall on Sand/Soil by Underside Injection

Project Specifics

Installation Dates
July 2, 2019

Environmental Conditions
Sunny, very humid, no rain.

Details
Vessel Diameters: 50 Feet
Storage Product: Diesel
Vessel Construction: Out-of-Service, (3) Leak Detection Ports, HDPE Liner or Equivalent, "Cathodic Protection" (CP) System, Concrete Ring Wall, Dike
Foundation Details: Sand/Soil - Fully Saturated

Inhibitor Delivery System (IDS)
Underside Injection IDS with ER Probe Monitoring

Zerust Product(s) Used
Zerion® FVS-B15
ER Probe Installation Equipment Kit



FIGURE 1: INSTALLED ER PROBE ENCLOSURE ASSEMBLY

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Existing ports were fitted with adapters to extend above grade for injection of corrosion inhibitor slurry and installation of ER probes. See the picture to the right for a depiction of these ports.

Slurry injection was completed on 6/27/2019 using all three of the available leak detection ports. Water was injected into each port with the calculated amount of FVS. Due to the water present under the tank, only half of the inhibitor was introduced and the remainder will be installed at a later date. This will allow the initial batch of inhibitor to slowly dissolve into the water that was already present under the tank.

The entire chime area was caulked with polyurthane sealant to close any gaps in the chime to limit the exhaustion of the inhibitor vapors from under the tank. Electrical Resistance (ER) probes were installed on 6/27/2019 in each leak detection port. All probes are CT20, cylindrical, 10' or 20' cables, initial readings were taken and each unit was confirmed functioning as normal. Reference the tank specific ER probe data report for further details on the data analysis.

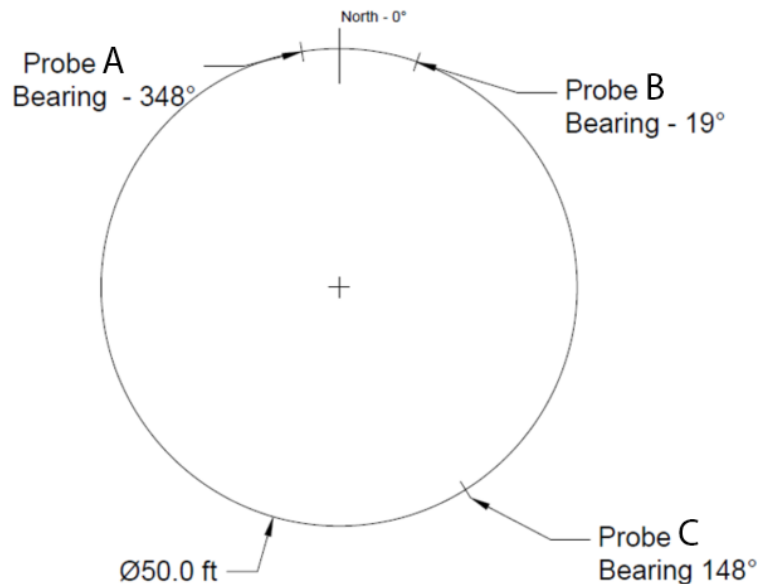


FIGURE 2: ER PROBE SCHEMATIC