

## Corrosion Protection of Railroad Pipe Casings by Injection of Corrosion Inhibitor Slurry

### Project Specifics

Installation Dates  
June 9-10, 2016

Approximate Location  
Alberta, Canada

Vessel Construction  
Railroad Pipe Casings

Zerust Product(s) Used  
Zerion FVS  
Zerion PGH-300 Gel

### Project Overview

Zerust® and the contractor filled four railroad pipe casings with the Zerion® FVS corrosion inhibitor powder and gel slurry at the client's site. The pipeline casing volume fills ranged from 125 gallons to 11 gallons.

### Procedures

#### Pressure Testing and Water Evacuation

Prior to the injection of corrosion inhibitor powder and gel slurry, the pipe casing was first pressure tested to ensure that the unit had no leakages of air. In addition to pressure testing, any water that was found residing within the pipe casing had to be removed prior to the injection of the corrosion inhibitor powder and gel slurry.

#### Inhibitor and Gel Slurry Injection

PGH-300 gel was used to produce the inhibitor powder and gel slurry that was pumped through the casing. The team made the decision that the PGH-400 gel could not be used during this project as it was deemed too viscous to be able to pump through the mixing tote.

### Conclusions

An inhibitor powder and gel slurry was pushed through the entirety of each casing. With water present in the casings, the concentration values maybe have decreased slightly. Many of the issues in delivering the correct inhibitor and gel concentrations to larger casings were mitigated through alternate injection methods (totes, larger pumps, etc.). While there had been a strategy for the placement of the totes, pump, and hoses, that strategy was severely hindered by the weather conditions as the equipment could not be properly spotted when the roads were washed out.



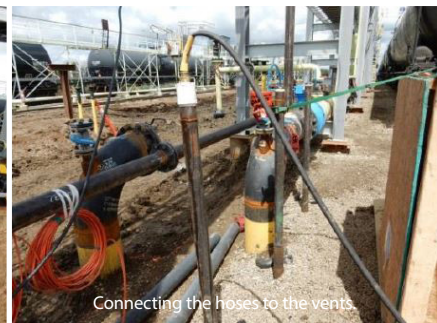
Pressure testing the pipe casings.



Adding gel to the hopper.



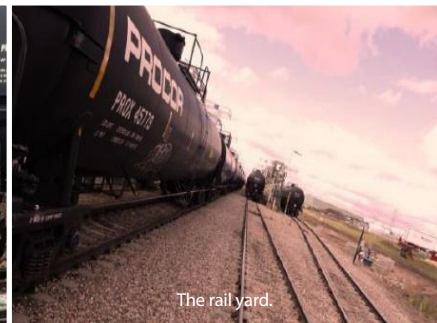
Fixing the eductor.



Connecting the hoses to the vents.



The injection system.



The rail yard.



Using the trash pump.



Weather conditions.



Using the trash pump.



Casing vent with excess water.