

# Corrosion Protection of Casing for a 240' Length Pipe using Zerust's Zerion® FVS Powder, & PGH-300 & 400 Gels

## Project Specifics

### Installation Dates

October 2022

### Location

Montreal, Canada

### Environmental Conditions

Avg. Temp. 16°C, ~60% humidity, sunny with clouds

### Asset Details

240-ft length

24" Casing diameter

18" Pipeline diameter

**Vessel Construction:** Not shorted; pressure tested, 1 vent pipe.

### Zerust Product(s) Used

Zerion® FVS Corrosion Inhibiting Powder

Zerion® PGH-300 Corrosion Inhibiting Gel

Zerion® PGH-400 Corrosion Inhibiting Gel

### Problem

The client wanted corrosion protection for pipe casing.

### Setup & Conclusion

No further details were given on the condition of the end seals outside the confirmation that they were repaired. A pressure test was conducted, with the casing pressurized up to 15 psi, and roughly 800-gal of water was discharged and disposed from the casing.

The team onsite was not able to push out the remaining water out as it would require increasing the compressed air over the 15 psi limit which could jeopardize the integrity of the end seals. Another pressure test was conducted successfully at 4.5 psi for one minute as measured from the pressure gages installed on both ends of the casing. Under the assumption that some water was left in the casing, the concentration of the VCI solution was increased by reducing the volume of potable water to 1,300-gal and mixing it with 27 pails of Zerust FVS corrosion inhibitor.

The pressure level was monitored during injection and stopped once liquid egress was noticed from the opposite vent pipe. In total, about 27 pails (405-kg) of Zerion FVS corrosion inhibitor, 15 pails (80-kg) of Zerion PGH-300, and 14 pails (80-kg) of Zerion PGH-400 were mixed with 1,300-gal of water and injected into the casing; it was assumed that 700-gal of water was present in the casing before injection, and the total volume of the final solution inside the casing totaled up to 2,020-gal.

