

UHR Inspection of 6" 1953 Natural Gas Pipeline in Pottstown, PA near Schuylkill River in Montgomery County, PA – Top 5 Pipeline Operator

Description:

- Cypress ILI trial run for Top 5 pipeline operator. The line was last inspected by Rosen with legacy technology
- Customer desired UHR Data on their pipeline to compare Cypress with prior vendor and another UHR competitor.

Solution:

- EcoVision™ 6" MFL-A UHR, GEO, IMU Tool
- Experienced technicians.
- Sophisticated L3 data analysis and reporting



Background

Cypress inspected ~ 12.41 miles of .280" 6" 1953 pipe with its EcoVision™ 6" MFL-A UHR, Geo, IMU Tool. This older line serves residents and businesses with natural gas in HCE areas. The run took 2.6 hours with average tool speed of 8 MPH vs. the planned average speed of 5.4 MPH. The tool was pulled into the launcher. The flow rate was 10 MMcuft/day with pressure of ~ 680 psi.

Unexpected challenges

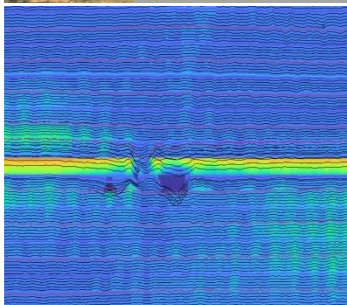
The flow rate was interrupted twice with the tool stopping and as pressure built back up it hit 13.6 MPH and 11.6 MPH and still both magnetized the pipe and captured data as the result of the Cypress electrical architecture and magnet design. The tool also experienced a hard stop at a lateral that had enough force to push the tool backwards.

Data Analysis

Our UHR tool collected over 61 GB of data. Our DA team of experts identified > 1,100 anomalies and > 155 clusters with our UHR technology. We identified nine anomalies > 40%, several pinholes, and one dent with metal loss on top of pipe. Competitor tools failed to identify a significant dent gouge with metal loss. The customer elected to perform an expensive dig to verify. Cypress was spot on and well within spec. The other two competitors missed this important threat.

Summary

Our advanced technology allowed us to capture high quality data despite several significant speed excursions, and a hard stop that pushed the tool backwards. The client compared the Cypress data with two competitors (one UHR Competitor). Cypress called a threat missed by the competitors. The client performed a dig and Cypress was correct and in spec. This represented a new critical milestone for Cypress compared to two highly respected competitors. This performance allowed Cypress to expand its relationship with this new major customer.



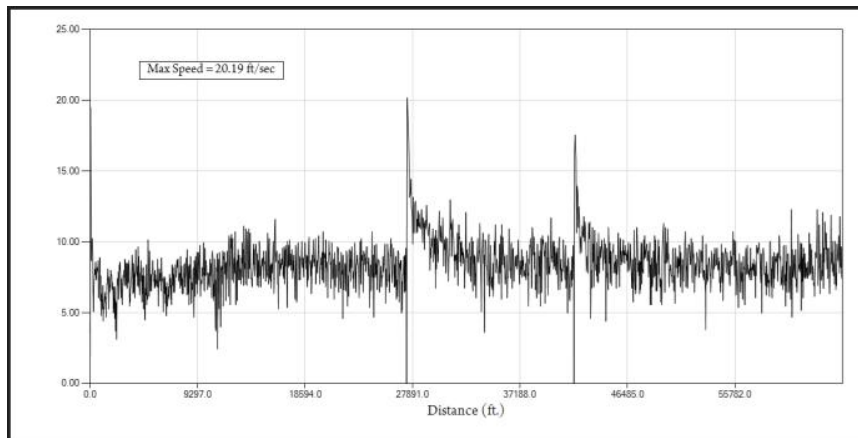


Figure 1 - Tool Velocity Graph

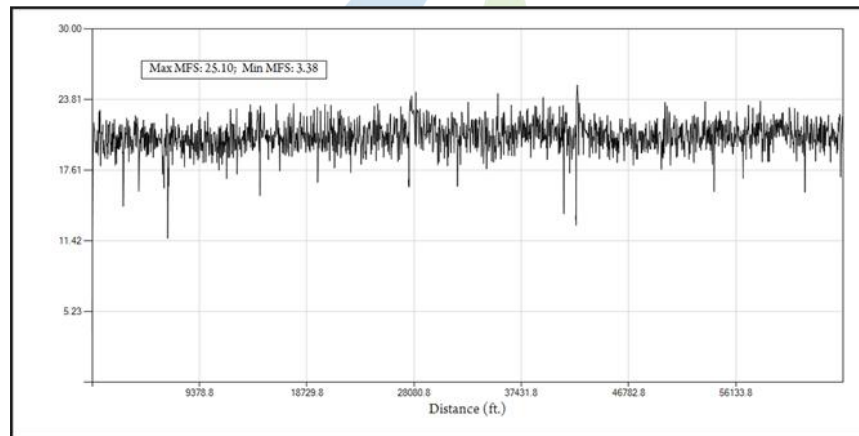


Figure 2 - Magnetization Graph

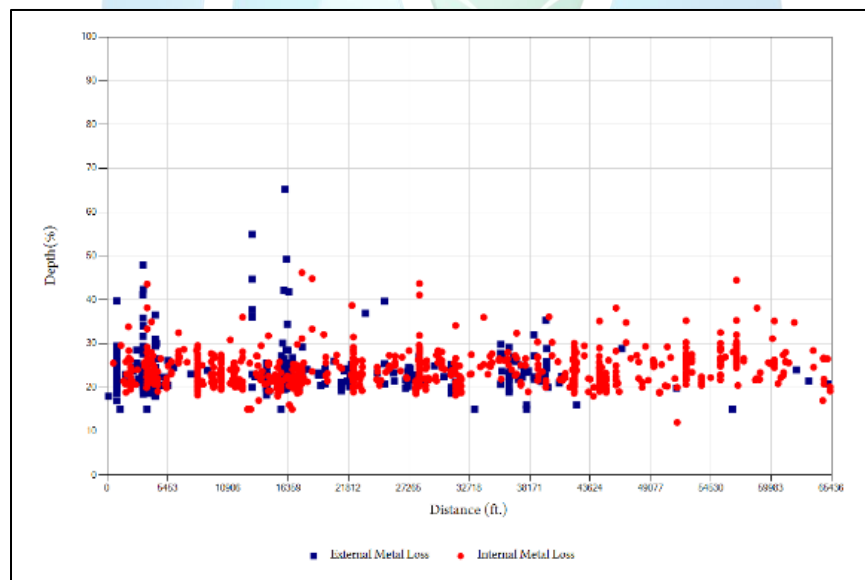


Figure 3 - Anomaly Distribution