## Gaining a Better Understanding of Hard Spot Threats: Summary of Findings from a Joint Industry Research Initiative

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Hard spots are typically associated with older pipelines. A recent joint industry research initiative, however, is revealing that hard spots may occur in a wider variety of pipeline vintages, sizes and manufacturing sources than previously thought.

Hard spots can pose a major threat in pipelines, and some have led to dangerous ruptures. Legacy ILI technology was unable to detect hard spots or characterize them with confidence. Inconclusive data might mean hardness is underestimated, leaving pipes unexpectedly vulnerable to cracking in the presence of other corrosive factors. This can be especially concerning as many lines transition to hydrogen transmission.

Carlos Diaz, ENTEGRA Account Manager, and Rick Desaulniers, ENTEGRA Chief Data Scientist, will discuss preliminary findings from this joint research program, which was undertaken in partnership with multiple operators and utilized the Pipeline Research Council International (PRCI) technology center.

They'll showcase how the ENTEGRA® Ultra High Resolution (UHR) ILI system aids in detection and detailed characterization of hard spots, including assigning more accurate Brinell ratings. They will also share the importance of looking for hard spots in pipes that aren't often associated with this anomaly, explore how this project uncovered different types of hard spots, and how the findings from this research may lead to changing protocols for hard spot detection.

KEYWORD(S) FOR SUBJECT AREA: ILI Analysis, Hard Spots, Pipe Vintage, Manufacturing Anomalies, Emerging Research

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