T.D. Williamson Introduces 4-inch Inspection Tool for Small Diameter, Low Pressure Pipelines

New Tool Provides Metal Loss and Geometry Data in a Single Inspection Run

Tulsa, OK, January 14, 2019 -- T.D. Williamson (TDW), the global pipeline solutions provider, has commercialized a 4-inch magnetic flux leakage (MFL) + deformation (DEF) + internal versus external discrimination (IDOD) tool that helps ensure pipeline integrity by detecting pitting and general corrosion as well as interacting features such as dents with metal loss in small diameter, low pressure pipelines.

The tool produces accurate and comprehensive metal loss and geometry data in a single run, reducing inspection costs and time. Its innovative design ensures the tool performs within the optimal inspection velocity range, producing high-quality survey results with reduced flow conditions. The tool generally requires a minimum operating pressure of 20.7 bar (300 psi), although it is capable of lower pipeline operating pressures and flows on a case-by-case basis.

According to Tod Barker, Senior Product Manager, Pipeline Integrity, the 4-inch tool overcomes challenges associated with conventional MFL inspections, such as difficulty navigating tight bends and speed excursions that limit data accuracy.

“In-line inspection using MFL technology is one of the most common non-destructive inspection methods utilized for the detection of general and pitting corrosion in pipelines,” Barker said. “The difficulty associated with conventional 4-inch MFL designs is, to sufficiently saturate the pipe wall with magnetic flux, the brushes must be short and thick. This creates drag that makes it more difficult for the tool to traverse the pipeline at optimal velocity. Slowing down, speeding up and stops and starts can all negatively affect the quality of the inspection data. The 4-inch tool significantly reduces that risk.”

TDW validated the reliability of the 4-inch tool in liquid and gas, at pressures as low as 13.78 bar (200 psi).

“In a recent low flow liquid pipeline inspection, the TDW 4-inch MFL+DEF+IDOD performed within the recommended speed of 3.05 meters (10 feet) per second or less for 100 percent of the inspection,” Barker said. With extensive verification testing during tool development, and more than 430.9 km (268 miles) in 31 customer pipeline inspections, this tool is well prepared to provide high quality pipeline inspection data for many pipeline conditions.

The 4-inch MFL+DEF+IDOD tool is available worldwide.
About T.D. Williamson
Drawing upon a 99-year history of industry leadership, TDW delivers a comprehensive portfolio of safe pipeline system solutions for onshore and offshore applications, including advanced isolation and repair, integrated pigging and integrity assessment solutions.

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