



**T.D. Williamson, Inc.**

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## 500,000 Miles . . . and Counting

### *T.D. Williamson Reaches Inline Inspection Milestone*

SALT LAKE CITY, Utah – September 25, 2014 – The advanced science of inline inspection (ILI) is now more than 50 years old. And although the field is full of brilliant technologies, it came from humble beginnings. In the mid-1960s, Magnetic Flux Leakage (MFL) was one of the earliest inspection offerings, providing operators with previously unavailable corrosion detection. Even though its range was limited to inspection of just the bottom quarter of the line, operators began to realize the value of such developments and pushed for increased capabilities like the ability to assess pipeline bore.

In 1972, T.D. Williamson (TDW) began meeting those needs by inspecting its very first mile of pipeline using KALIPER® technology to detect large bore reductions in newly constructed pipelines. At the time, KALIPER inspection – which revolutionized the industry by locating large dents before pipelines were placed in service – was on the cutting edge of inline inspection technology.

It's been a long journey since that day in the early '70s – and this summer marked another important milestone: In July, TDW announced that its technology had helped customers inspect 500,000 miles (805,000 kilometers) of pipeline.

Along the way, customers around the globe have shared their challenges with TDW, helping the company to build upon its original pipeline inspection technology – and laying the groundwork for another 500,000 miles of service.

### **Better Data; Less Risk**

Pipeline inspection is a complicated beast: In the early days before innovations like KALIPER technology, operators had to rely on methods like visual inspections, hydro-static testing and close interval surveys to detect defects in their pipelines, none of which offered the quantitative results of ILI.

But as more efficient inspections were developed, pipeline operators faced increasing challenges: While technology advancements were providing operators with more accurate pipeline information for safer operation, first-generation inspection tools were simply ill equipped to meet growing industry demand. An operator who needed to look for multiple pipeline integrity threats – such as ovalities, corrosion and cracking – had few options.



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This risk became even more of a concern by the early 2000s, as operators faced aging infrastructure, expanding pipeline networks, and greater regulatory requirements. Operators needed greater accuracy in their ILI data.

In response, TDW invested in a series of integrity inspection technologies and new ILI methods that would increase safety and result in better-quality data for operators.

One of the first steps was to introduce an innovative line of specialized inspection vehicles that would ensure more accurate and specific data. In 1997, TDW began providing Magnetic Flux Leakage (MFL) technology, which was created for the sole purpose of detecting pipeline corrosion. After MFL came TDW's high-resolution deformation (DEF) technology, which was designed for enhanced detection and analysis of pipeline bore reductions and expansions.

Other innovations followed, such as low-field MFL (LFM), which measures mechanical stress and hard spots; XYZ Mapping technology, which assists operators in calculating bending strain, improving alignment sheets, and pinpoint accuracy of defect excavation sites; SpirALL® MFL technology which assesses the longitudinal axis of the pipe for crack-like defects; and SpirALL® Electromagnetic Acoustic Transducer (EMAT) technology, for the detection of cracks.



But even with all the new technologies, inspection challenges were far from over: Originally, as new technology was introduced, operators would need to run a separate tool for each type of defect. Each tool required its own complex software and operating system, and piecing the separate data sets into a single, useful picture could be challenging.

Another challenge? Simple operational safety. A common growing desire amongst pipeline operators was to reduce the number of times personnel had to physically interact with the pipeline, meaning reductions in the number of times they had to open or close launchers and receivers, as well as handle multiple inspection tools.

So, in the last five years, TDW has helped the industry take a dramatic leap in ILI technology by developing the Multiple Dataset platform (MDS).

### **Offering Customers "Multiple" Innovations**

Instead of running the tools one at a time, with a Multiple Dataset inspection, operators could run multiple technologies through a pipeline at once. In a single inspection, operators are able to address most integrity threats, including characterization and sizing of corrosion, mechanical damage, crack-like defects, selective seam weld corrosion (SSWC), and hard spots. The MDS approach also provides the capability to categorize pipe joints by their "fingerprints."

The result? A safer ILI process and a "complete" data package that gives operators the most detailed pipeline information available, equipping them to efficiently prioritize their risk



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reduction and threat mitigation activities.



ILI has come a long way since the development of early MFL and KALIPER technologies – and more than 40 years and 500,000 miles later, operators now have a wide range of technologies to gather accurate data on their pipeline systems. TDW continues to look for innovative ways to improve the process and ensure that operators can conduct safe, accurate inspections for years – and miles – to come.

### **About T.D. Williamson**

Global pipeline service provider T.D. Williamson delivers a comprehensive portfolio of safe integrity pipeline system solutions for onshore and offshore applications, including hot tapping and plugging, pipeline cleaning, integrity inspection, pigging and non-tethered plugging technology for pressurized piping systems.

Note to editors: To obtain corresponding imagery, please contact Waylon Summers below.

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