

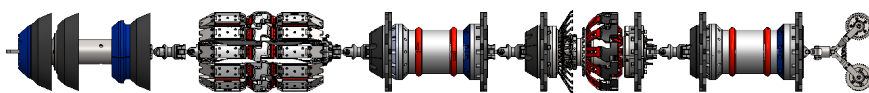


CYPRESS IN-LINE INSPECTION

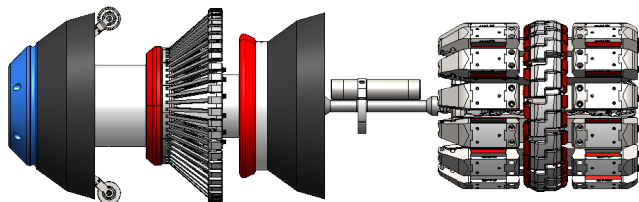
Tool Fleet

Our axial MFL tools and technology were developed by highly experienced mechanical, electrical, software, and signal processing engineers with decades of ILI experience having worked for many of the industries leading ILI providers. The result is the best-in-class **EcoVision™** UHR ILI tools.

4"-12"



16"-24"



First Run Success

The **EcoVision™** MFL, GEO, ID/OD IMU tool fleet is a 5th generation design from engineers that began developing ILI tools in the 1980s. Each generation of design has introduced improvements and advancements to the ability to navigate pipeline geometries, and detect, identify, and locate metal loss anomalies. That progression of quality provides exceptional first run success with ILI systems qualified to API 1163 standards and supported by technicians certified per ASNT ILI-PQ.

Tool capabilities and benefits

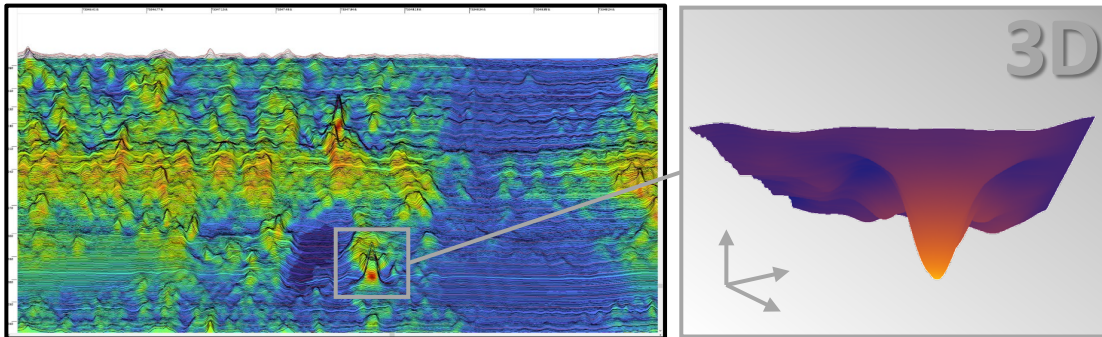
- Ultra-high resolution (UHR) sensor spacing of 1/8" and sampling frequency of 1,400 Hz (per second) with overlapping heads to eliminate gaps in coverage
- 1.5 D back-to-back bend navigation with 20% bore reduction for all tool sizes
- Full UHR inspection speed up to 9 mph (4 m/s) with the capability to capture quality data in speed excursions well above rated speed

Detection and Sizing Features

- Detection of all metal loss morphologies from pinholes to general corrosion per POF 100
- Continuous improvement of sizing capabilities with an active dig feedback program to enhance the training data for sizing algorithms
- Accelerated Reporting, Bend Strain, Dent Strain, and Enhanced Pipeline Movement data analysis services available

Pipeline Data

EcoView™ Software is a powerful companion to the **EcoVision™** UHR tools and provides fast and accurate viewing of the pipeline data through automated detection and sizing algorithms. Cypress' highly trained data analysts refine the characterization of anomalies to enable timely reporting tailored to customer requirements.



The software visualization of UHR data provides a detailed picture of complex corrosion and detects pinholes, axial slotting, and seam welds. This clear picture of pipeline anomalies enables highly reliable sizing and pressure limit calculations. High confidence in the characterization of anomalies translates into fewer unnecessary digs.

Legacy Vendor Tools Predicted Anomaly Shape



Standard Sampling Frequency

Cypress UHR Predicted Anomaly Shape



UHR Sampling Frequency – 2X



Cypress ILI can also provide turnkey services to support inspections and maintenance of pipelines with 3rd parties including:

- Pump services
- Product filtering
- Cleaning pigs
- Gauge pigs
- API 570 Inspection
- AGM/GPS Surveys
- Pig Tracking
- DOC & Centerline Surveys
- Pipeline Marker Replacement & Installation
- Comprehensive Project Management
- Non-Destructive Examinations (NDE)

