MATRIX UT

All-In-One Advanced Pipe Scanner System

Revolutionizing pipeline girthweld inspections
with advanced FMC & TFM technology and faster scanning speeds
than ever before.



ARGUS NDT

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The 2nd Generation Ultrasonic Testing Remote System (UTR V2)





Universal Dual Connectivity
Streamline NDT operations with universal high-density D-Sub or IPEX connectors, ensuring seamless integration and enhanced flexibility in dual transducer compatibility.

Phased Array & Conventional UT
64:128 Phased Array (PA) channel configuration with parallel firing.
20 Conventional transceiver channels to support complex setups.

Umbilical Lengths
The umbilical is offered in various lengths, from 1 meter (+/- 3 feet) to over 100 meters (+/- 300 feet) for hard-to-reach places. The umbilical employs SMPTE 304, integrating optical fiber and DC power supply, to facilitate 10 Gb Ethernet for enhanced FMC scanning speeds.

Encoder & I²C Bus
2 Axis of Encoder Inputs: Supports quadrature and step/direction counting, allowing for pipe scanning and dual-axis corrosion mapping.
Automated Encoder Accuracy Verfication: Designed to automatically check and confirm the precision of encoders.
Dedicated I²C Bus: Provides a dedicated bus for connecting external sensors like temperature probes or alternative encoders.

GPU-Powered Inspection Efficiency
Fast and efficient GPU-powered processing techniques, such as Total Focusing Method (TFM) and Phased Coherence Imaging (PCI), enabling quick and accurate data analysis for enhanced decision-making.

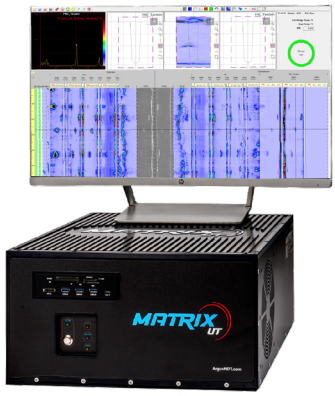
Rugged & Weatherproof Enclosure
The Matrix UTR V2 system is constructed to meet the IP67 certified rating. The UTR V2 is designed utilizing high-grade materials, advanced sealing and temperature control, ensuring consistent performance in even the harshest environments.

The 2nd Generation Ultrasonic Testing Main (UTM V2) System

Advanced Visualization
The UTM V2 is the data acquisition processing unit (DAQ) of the Matrix UT system, data is optimized for both real-time and post-acquisition analysis.

Data Handling:
- Full Matrix Capture (FMC)
- Multi-Channel Data Collection
- High Sampling Rates
- Real-Time Adaptive Wall Thickness

Conventional Imaging Techniques:
• A-scan • B-scan • C-scan • D-scan



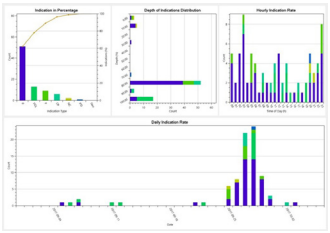
Advanced Imaging Techniques:
- Zonal Phased Array
- S-scan
- Total Focusing Method (TFM)
- Phased Coherence Imaging (PCI)
- Plane Wave Imaging (PWI)
- Super Resolution TOFD

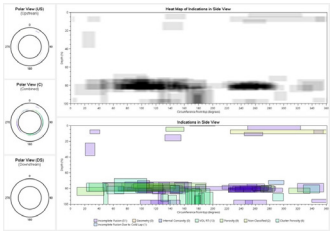
Post-Processing Techniques:
- Migration
- Anti-Aliasing Imaging

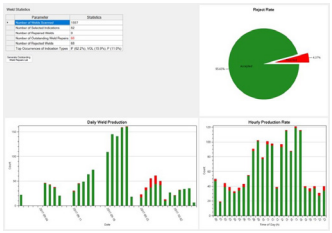
The Matrix DS: Data Analysis & Reporting

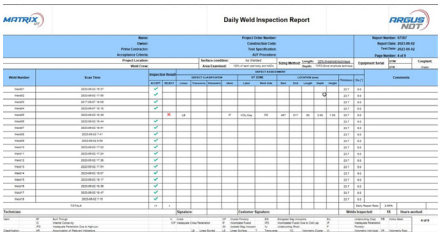
The Matrix DS is designed to seamlessly integrate with the Matrix UT system to provide real-time, insightful data analysis. Our software harnesses the latest advancements in data science to provide an intuitive platform with comprehensive reports like the following:

- Inspection Summary Reports
- Defect Characterization Reports
- Fitness-for-Service Assessments
- Trend Analysis Reports
- Statistical Probability Analysis
- Compliance Documentation
- Weld Quality Reports
- Quantitative Analysis Reports
- Technical Audit Trails
- Risk Assessment Reports
- Data Archiving for Long-Term Integrity Monitoring









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