



**TULSA
INSPECTION
RESOURCES**
INSPECTION & INTEGRITY

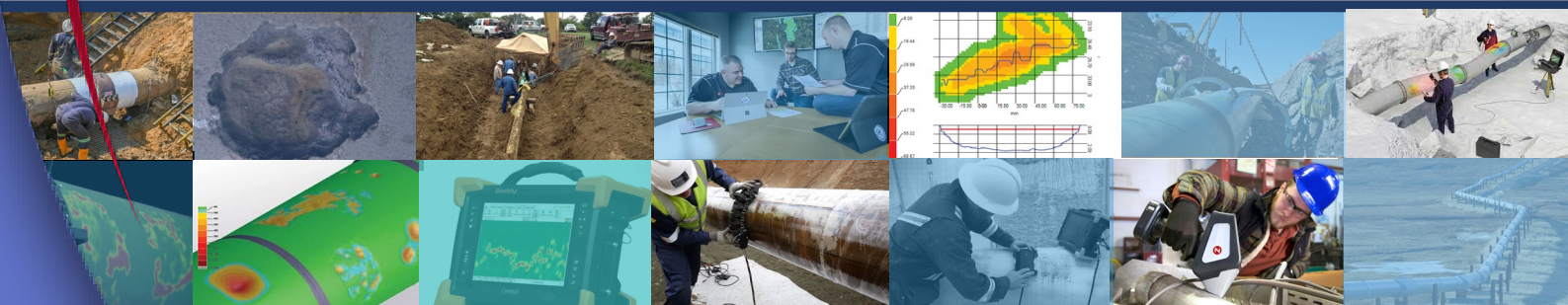
ADVANCED NDE

Our Technicians provide VALUE

ADVANCED NDE CAPABILITIES

TIR technicians utilize their standard toolbox along with **advanced** NDE equipment to better categorize critical anomalies on a pipeline. TIR's specialized Technicians are qualified to ASNT TC-1A, ASNT ISQ, API QUPA (Phased Array), ASNT QUTE & ASNT L3. Internally, we promote the advancement of our NDE technicians with both industry certifications and internal training to springboard their career and give them a platform to perfect the use of new technologies.

- ◇ **Phased Array UT (PAUT)**
- ◇ **HydroForm Phased Array**
- ◇ **FlexoForm Phased Array**
- ◇ **Creaform Laser Scanning**
- ◇ **Carbon Equivalency (LIBS)**
- ◇ **Automated UT (AUT)**
- ◇ **MFL Floor Scanning (Tanks)**



Our **VALUE** resides in our ability to identify threats which could potentially compromise the integrity of our clients' pipeline assets.

"Regarded & Praised"

TIR's technicians are well respected in the industry, being identified as leaders, providing the best service out of any peer group.

TIR's specialized QA/QC department manages all field reports prior to submission to any end user. This ensures all NDE data captured is transposed timely and accurately for our customers review and action. Similarly, unity plots are incorporated into TIR reports to better differentiate between real anomaly measurements and ILI tool data.

Differentiated field service is at the core of what makes TIR the ***BEST*** valued NDE provider in the pipeline industry, proving it day-in and day-out.

**PHASED ARRAY UT
(PAUT)**

**CREAFORM LASER
SCANNING**

**AUTOMATED UT
(AUT)**

**CARBON
EQUIVALENCY (CE)**



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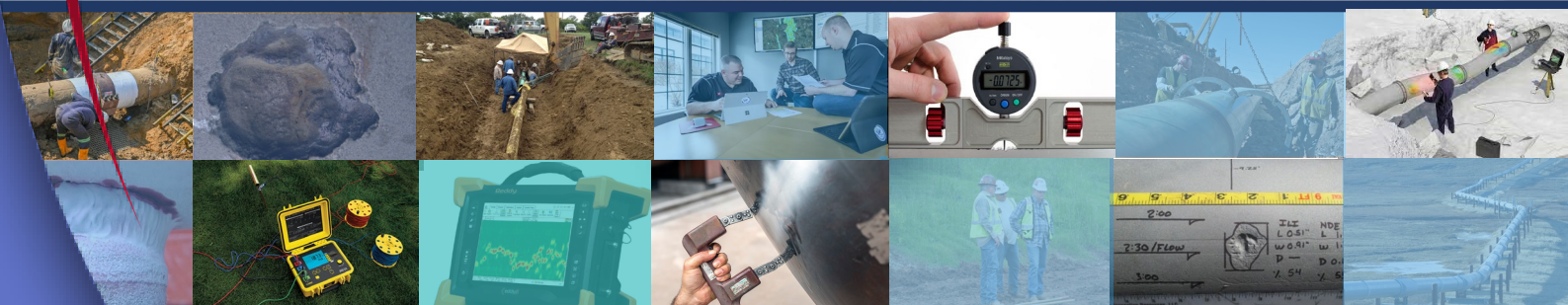
CONVENTIONAL NDE

Our Technicians provide VALUE

CONVENTIONAL NDE CAPABILITIES

NDE technicians arrive equipped with a **FULL** toolbox of anomaly detection equipment for identifying known and unknown threats to a pipeline. TIR technicians are qualified to the latest ASNT certifications and are trained to perform a variety of NDE functions related to Internal Corrosion Direct Assessment (ICDA) & External Corrosion Direct Assessment (ECDA).

- ◇ **Ultrasonic Testing (UT)**
- ◇ **Shear Wave UT (SWUT)**
- ◇ **Magnetic Particle Inspection (MPI)**
- ◇ **Dye Penetrant Testing**
- ◇ **Pipe to Soil, Soil Resistivity & pH**
- ◇ **Pit Depth Gauging**
- ◇ **MIC & Coating Inspection**



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"Admired & valued"

MAGNETIC PARTICLE INSPECTION

EXTERNAL CORROSION DIRECT ASSESSMENT

SOIL RESISTIVITY

ULTRASONIC TESTING (UT)

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RADIOGRAPHIC TESTING

Our Technicians provide VALUE

RADIOGRAPHIC TESTING (RT) CAPABILITIES

Radiographic Testing (RT) is a method used to inspect welds using **X-rays or gamma rays** to “see through” the weld and identify internal defects. Technicians use various methods of RT to ensure the welds are free of defects like porosity, slag inclusions, lack of fusion, incomplete penetration, cracks & burn through. RT is commonly used on new welds to prove they are structurally sound.

- ◇ **Conventional RT (Film)**
- ◇ **Computed RT (CR)**
- ◇ **Digital RT (DR)**
- ◇ **Digitization of Film**
- ◇ **Level III Film Review**
- ◇ **Sources: Iridium-192, Selenium-75, Cobalt-60**



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"Trusted &
Revered"

TIR's RT technicians are well respected in the pipeline industry, being identified as leaders, providing the best service out of any peer group.

TIR's specialized RT capabilities encompass all facets of X-Ray services; whether Conventional (Film) RT, Computed RT or Digital RT. Our personnel and results speak for themselves.

Differentiated field service is at the core of what makes TIR the ***BEST*** valued NDE provider in the pipeline industry, proving it day-in and day-out.

CONVENTIONAL
RADIOGRAPHY

COMPUTED
RADIOGRAPHY

LEVEL III FILM
REVIEW

DIGITAL
RADIOGRAPHY



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INSPECTION SERVICES

Inspectors you can TRUST

INSPECTOR CLASSIFICATIONS

- Project Manager
- Construction Manager
- Chief Inspector
- Assistant Chief Inspector
- API 653 Certified Tank Inspector
- API 510 Certified Pressure Vessel Inspector
- API 570 Certified Process Piping Inspector
- API 1169 Certified Pipeline Construction Inspector
- Senior AWS CWI Certified Welding Inspector
- AWS CWI Certified Welding Inspector
- E&I Inspector
- Safety/Environmental Inspector
- Tank Inspector (non-certified)
- Mechanical/Civil Inspector
- Utility Inspector
- Polyethylene (PE) Inspectors
- NDE Inspectors
- CPWI Certified Welding Inspector
- Materials Inspector
- Office Administrator



OUR CUSTOMERS respect the TIR brand and understand the enhanced level of service they'll receive from a contractor who's "been there, done that".

"Respected
& Revered"

TIR inspects full pipeline systems, process plants, pump and compressor stations, terminals, and storage tanks.

TIR holds an extensive resume database comprising over 10,000 certified inspectors across the nation that can be readily deployed per customer requirements.

TIR has over 20 years of industry experience to support small projects requiring a single inspector to major projects requiring hundreds of qualified inspectors. We can handle any size project!



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ILI SUPPORT SERVICES



Our Field Personnel have INTEGRITY

ILI SUPPORT CAPABILITIES

TIR trackers provide 24-hour field coverage, utilizing the latest technology for AGM Survey (sub-cm/dm/m GPS accuracy) & Pig Tracking. Field personnel are highly trained, cross-functional and regarded as the very best in the industry, arriving fully equipped with all the modern tracking technologies such as geophones, transmitters, receivers, computers w/ GPS navigation and tracking software.

- ◇ **Pig Tracking (ILI, gauging, cleaning)**
- ◇ **Above Ground Marker (AGM) Survey**
- ◇ **As-Built Drawings (traps, repairs)**
- ◇ **Tool Lifting/Loading**
- ◇ **Dig Staking & GPS Centerline Surveys**
- ◇ **NORM & Benzene Monitoring**
- ◇ **Remote/Online Pig Tracking**



Our trackers provide **VALUE**, with the ability to pre-determine threats which could potentially compromise a tool run or the safety personnel onsite.

"Admired & Respected"

TIR's field personnel are well respected in the industry, being identified as leaders, providing the best service out of any peer group.

TIR's quality control processes drive field operations to a higher standard. We have extensive experience tracking thousands of pigs in all types of applications and terrain. Remote/Online tracking is also achievable where standard tracking is not realistic (waterways, isolated areas, accessibility constraints, etc).

Differentiated field service is at the core of what makes TIR the **BEST** valued provider in the pipeline industry, proving it day-in and day-out.



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TANK INSPECTION

Tank Inspectors you can TRUST

TANK INSPECTION CAPABILITIES

TIR provides certified tank inspection for both in-service and out-of-service tanks. Whether API 653/510/570, Certified Welding, AMPP/NACE or MFL tank floor scanning, we provide all the services required to ensure your tank is fit for use. Tank floor scanning involves utilizing specialized MFL technology operated by certified NDE technicians to confirm all data is accurate and documented.

- ◇ **MFL Floor Scanning**
- ◇ **API 653/510/570/1169**
- ◇ **Non-Destructive Examination (NDE)**
- ◇ **Maintenance/Integrity Inspection**
- ◇ **AMPP/NACE Coating Inspection**
- ◇ **Certified Welding Inspection (CWI)**
- ◇ **In-Service or Out-of-Service Tanks**



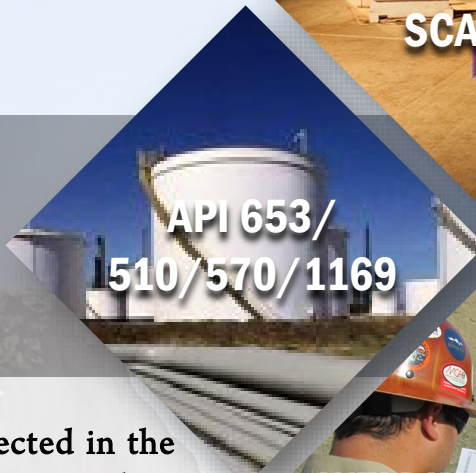
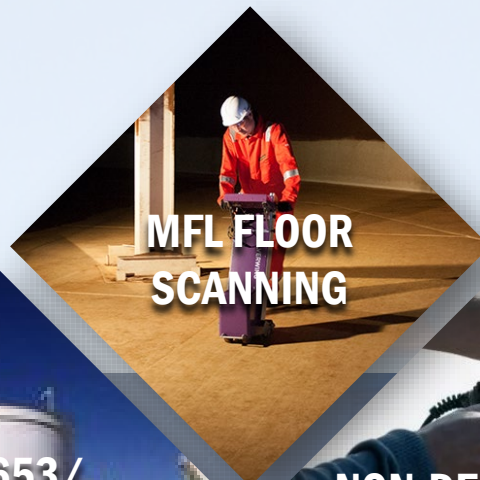
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"Integrity & Pride"

TIR's field personnel are well respected in the industry, being identified as leaders, providing the best service out of any peer group.

TIR conducts critical Tank inspections, providing certified field personnel to execute various functions to ensure tanks are fit for use & in compliance with PHMSA regulations. API 653 inspections are done in tandem with MFL floor scanning operations to ensure tanks are inspected efficiently & at the lowest possible cost.

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GIS DATA SERVICES



Field Data Collection that's PRECISE

GIS DATA CAPABILITIES

TIR offers comprehensive solutions to common GIS data challenges, such as fragmented data or deliverables which are difficult to integrate into existing user databases. Luckily, TIR provides data collection and business ready data integration services. Precise annotations ensure data meets client specifications for seamless integration into GIS databases while ensuring the data is accurate and formatted correctly.

- ◇ **GIS Field Data Collection (GPS Accuracy)**
- ◇ **Quality Controlled GPS Data Integration**
- ◇ **As-Built Construction Data**
- ◇ **As-Is Field Data Verification**
- ◇ **GIS Data to Software Integration**
- ◇ **Aged Asset Data Comparisons**
- ◇ **Data Conversion & Formatting**



Our VALUE resides in our ability to verify operator asset data precisely, delivered seamlessly in a way that streamlines operator GIS records.

"Honest & Virtuous"

TIR facilitates collection and aggregation of critical GIS field data in a way that's efficient, accurate and cost effective.

TIR's GIS services streamline critical data management for pipeline/facility inspection & integrity. First, we utilize our qualified field personnel to collect GPS coordinates, then integrate this data into existing data warehouses, databases, and analytical software, where we ensure seamless data management & analysis to our clients, improving efficiency & compliance within industry regulatory standards.

Our differentiated services are at the core of what makes TIR the BEST valued provider in the pipeline industry, proving it day-in and day-out.

GIS DATA
COLLECTION

DATA
INTEGRATION

AS-BUILT & AS-IS
DATA VERIFICATION

QUALITY CONTROLLED
DATA PROCESS



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