

ADVANCED NDT
WELDING INSPECTION
CONVENTIONAL NDT

PIPELINE INTEGRITY
NDT AUDITING
AUT DATA REVIEW



NDT Group Inc. (NGI) provides **Nondestructive Testing, Auditing, and Inspection** services to the industrial sector in Canada and across the world. Our company offers a combination of basic and innovative NDT Technologies, distinguishing itself as first-class provider.

RELIABILITY & INTEGRITY

INNOVATIVE NDT SOLUTIONS

NGI delivers non-destructive testing and inspection services in a safe, experienced, and ethical manner. We are committed to continuous education, substantial training, and skilled performance in our quality control and safety protocols.

We are a Nondestructive Testing (**NDT**) and Inspection services agency based in Ontario, Canada. Our inspectors & technicians have many combined years of experience in the examination of oil & gas, pipelines, petrochemical and refinery installations, pressure vessels, piping and storage tanks. Our testing and inspection services are available for projects worldwide.



OUR SUCCESS IS DEFINED BY YOUR CHALLENGE"

PETRO-CHEMICAL

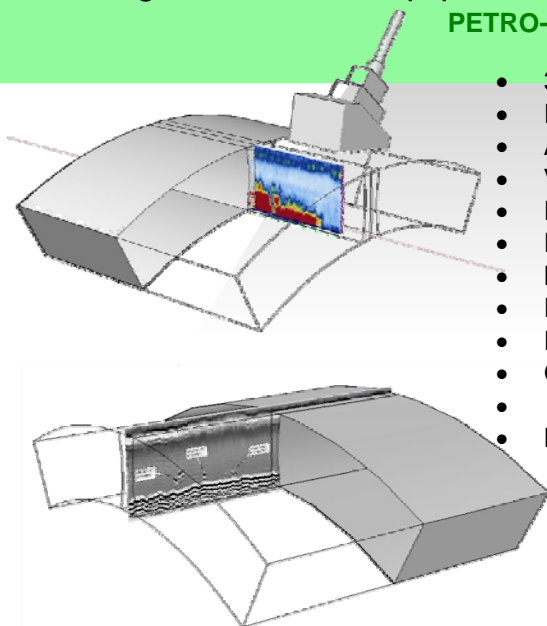
NDT and Inspection Services



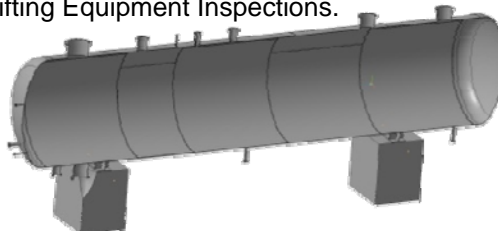
Petro-Chemical is a critical component of Oil & Gas and Chemical production. To maintain efficient, safe and economical operations, routine Shut-Downs are a necessary requirement. The potential for safety and environmental risks can be minimized through routine inspections of Critical Assets such as Boilers, Columns, Reactors, Towers, Piping, Tanks and Pressure Vessels. Problems identified from these inspections can help prevent unscheduled shutdowns, plan turn-arounds, prevent equipment Failures and subsequent catastrophic damage.

NGI employ some of the most experienced NDT Technicians in the Industry with an expansive knowledge of Pressure Equipment, Damage Mechanisms and Processes.

PETRO-CHEMICAL PLANT INSPECTION SERVICES:



- 3rd Party Inspection, NDE Review/Auditing of Repairs and Construction projects
- Inspection of Tower, Columns, Spheres, Storage Tanks and Process Piping.
- AUT/PA/Tofd In-lieu of Internal Inspections for Tanks and Pressure Vessels.
- Visual Inspection and Monitoring of critical weld repairs and alterations.
- Power Boiler Inspections, High Energy Piping and FAC Surveys.
- PA/AUT for detection of HIC, SOHIC, Blistering and HTHA.
- Phased Array UT of Boiler Tube and Piping welds.
- General Piping, Vessels and Tank Inspections.
- API QUTE certified
- Lifting Equipment Inspections.

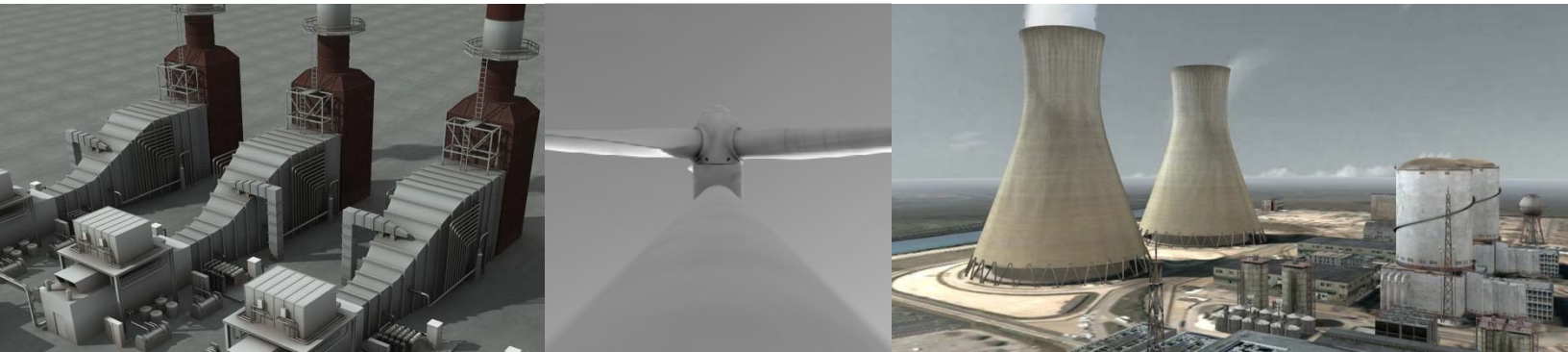


- Ultrasonic Thickness and Examinations of Welds, Forgings, Castings
- Advanced crack sizing using Phased Array UT, Tofd, Tip Diffraction, High Angle LW
- Corrosion Mapping - Internal/External
- Automated UT Services (AUT)
- Stress-Corrosion Cracking Detection, Sizing and Monitoring



POWER GENERATION

NDT and Inspection Services

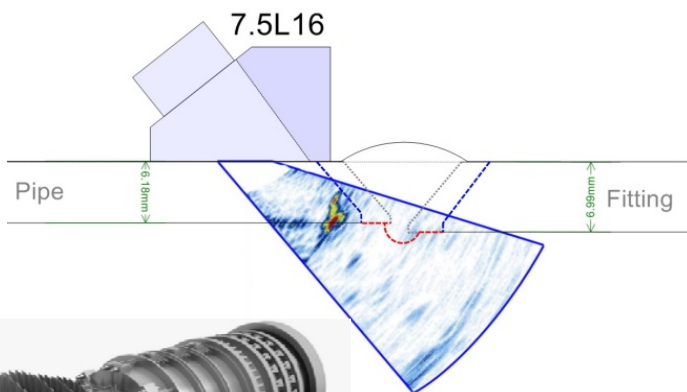


Power Generation is a fundamental component of our civil infrastructure and everyday life. Reliability of these plants and protection are of the greatest importance. The potential for safety and environmental risks can be minimized through routine inspections of Assets such as Boilers, Piping, Tanks and Pressure Vessels. Problems identified from these inspections can help prevent unscheduled shutdowns and help trend problems so they can be safely monitored and tracked.

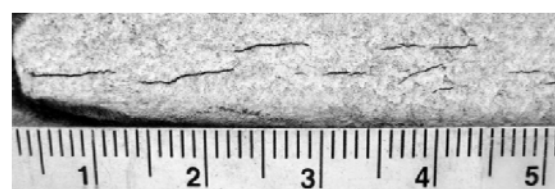
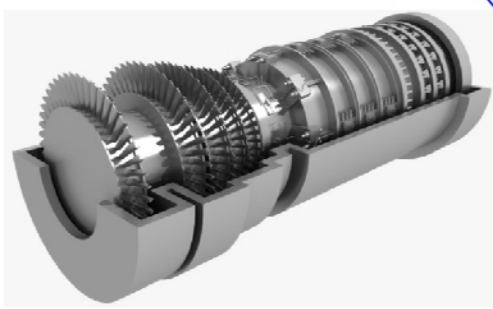
NGI employ Technicians that are highly experienced in Wind Power, Nuclear GS, Fossil, Co-Generation and Hydro-Electric Plants. From Wind Turbines to Periodic Inspection of Piping Welds in Nuclear GS, our experience and know-how can be a valuable asset to your operation.

POWER GENERATION SERVICES:

- Turbine Component Inspections, PAUT and MT
- AUT/PA/Tofd in-lieu of Internal Inspections of Tanks and Pressure Vessels
- Deaerator Storage Tank and Vessel Inspections
- Flow Accelerated Corrosion Surveys
- Automated UT for Corrosion Mapping (C-Scan)
- Boiler Thickness Surveys and Visual Inspections
- Phased Array UT of Boiler Tube welds
- Specialists in HRSG/OTSG Weld Inspections of Tubes, Header Cracking and Casing Cracks



- Ultrasonic Examinations of Welds, Forgings, Castings Babbitt Bearings and UT Thickness Surveys
- Advanced crack sizing using Phased Array UT, Tofd, Tip Diffraction and High Angle LW
- Corrosion Mapping - Internal/External
- High Energy piping Inspections for Creep Cracking
- Stress-Corrosion Cracking Sizing and Monitoring



MINING INDUSTRY

NDT and Inspection Services

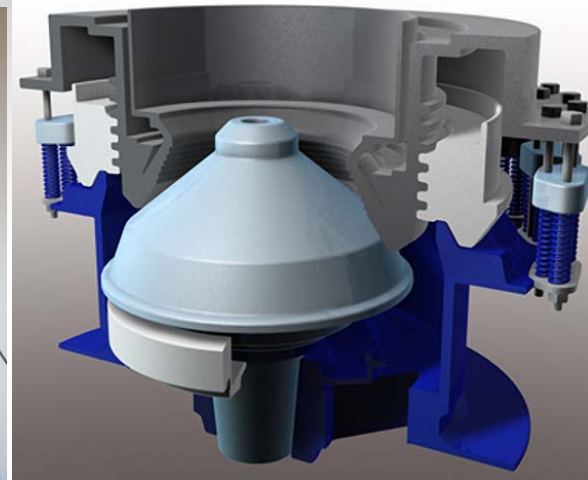
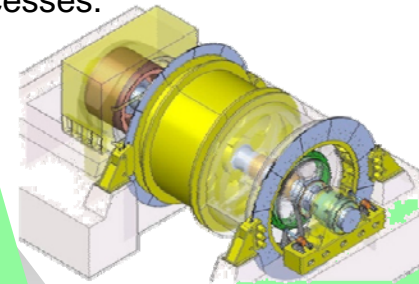


Mining Industries play an integral part in supplying the basic building blocks of many of the goods we use and manufacture. Mining industries employ >400,000 people across Canada alone. Many components involved are vital to the safety and reliability of Mines, Mills, Smelters and Quarries. Safety and environmental risks can be minimized through routine inspections of critical Assets such as Hoists, Conveyances, Crushers, Furnaces, Ball/Rod Mills, Process Piping, Tanks and Pressure Vessels.

NGI employ some of the most experienced NDT Technicians in the Mining Industry with an intimate knowledge of the Pressure Equipment, Damage/Wear Mechanisms and Processes.

MINING INDUSTRY INSPECTION SERVICES:

- Inspection of Hoists, Mills, Conveyances, Crushers, Storage Tanks and Process Piping.
- 3rd Party Inspection, NDE Review/Auditing of Repairs and Construction projects
- AUT/PA/Tofd In-lieu of Internal Inspections for Tanks and Pressure Vessels.
- Smelters and Acid Plants, Absorbers, Converters, Exchangers and Furnaces.
- Visual Inspection and Monitoring of critical weld repairs and alterations.
- General Piping, Vessels and Tank Inspections.
- Lifting Equipment Inspections, Scissor Trucks.
- Power Plant and Boiler Inspections.
- Phased Array UT of Gear Teeth.

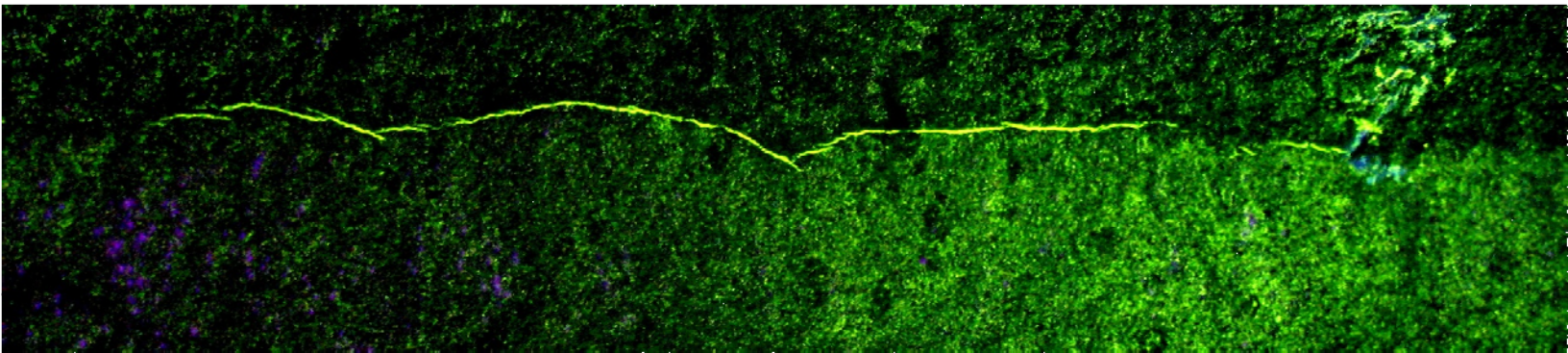


- Phased Array UT of Gear Teeth in-lieu of MT
- Ultrasonic Thickness and Examinations of Welds, Forgings, Castings
- Advanced crack sizing using Phased Array UT, Tofd, Tip Diffraction, High Angle LW
- Corrosion Mapping - Internal/External
- Automated UT Services (AUT)
- Crack Detection, Sizing and Monitoring
- Phased Array in-lieu of RT for Piping/Vessel Welds



PULP AND PAPER

NDT and Inspection Services

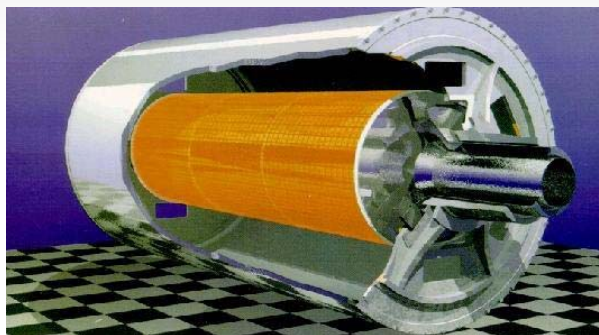
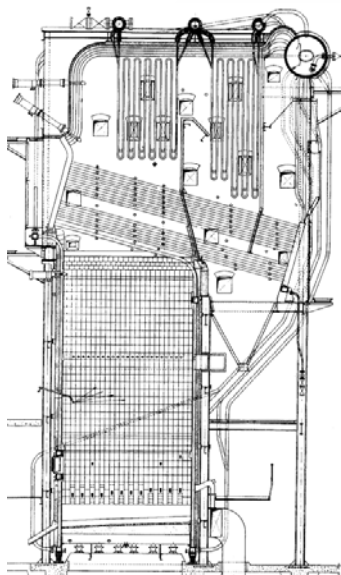
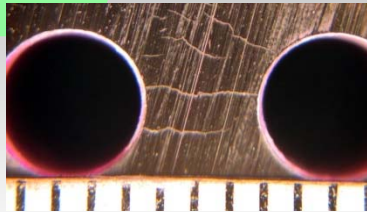


Pulp & Paper is one of North America's most important and Profitable industries. To maintain efficient, safe and economical operations, routine Shut-Downs are a necessary requirement. The potential for safety and environmental risks can be minimized through routine inspections of Critical Assets such as Boilers, Dryers, Digesters, Evaporators, Piping, Tanks and Pressure Vessels. Problems identified from these inspections can help prevent unscheduled Shutdowns and Equipment Failures.

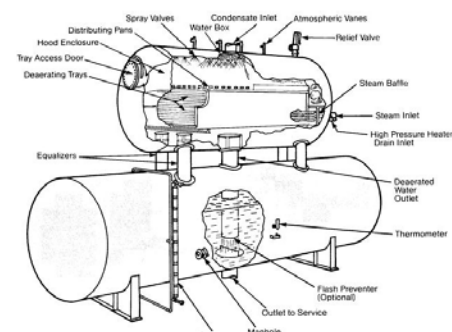
NGI employ some of the most experienced NDT Technicians in the Pulp and Paper Industry with an intimate knowledge of the Pressure Equipment, Damage Mechanisms and Processes.

PULP AND PAPER MILL INSPECTION SERVICES:

- 3rd Party Inspection, NDE Review/Auditing of Repairs and Construction projects
- Paper Machine Components, Dryer Cans, Suction and Couch Rolls
- Recovery, Power Boiler Inspections, High Energy Piping and FAC Surveys
- AUT/PA/Tofd In-lieu of Internal Inspections of Tanks and Pressure Vessels
- General Piping, Vessels and Tank Inspections
- Digester and Acilliary Vessel Inspections
- Deaerator Storage Tank Inspections
- Phased Array UT of Boiler Tube welds.
- Lifting Equipment Inspections
- Evaporator Effect Train Inspections



- Ultrasonic Thickness and Examinations of Welds, Forgings, Castings
- Advanced crack sizing using Phased Array UT, Tofd, Tip Diffraction, High Angle LW
- Corrosion Mapping - Internal/External
- Automated UT Services (AUT)
- Stress-Corrosion Cracking Detection, Sizing and Monitoring



PIPELINE INTEGRITY DEFECT ASSESSMENT

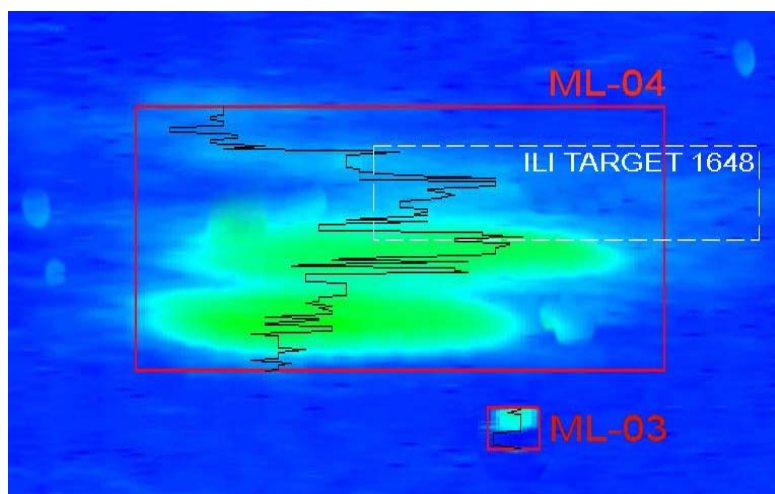
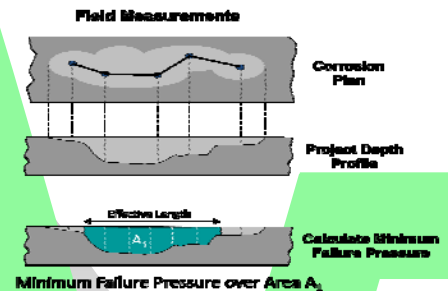
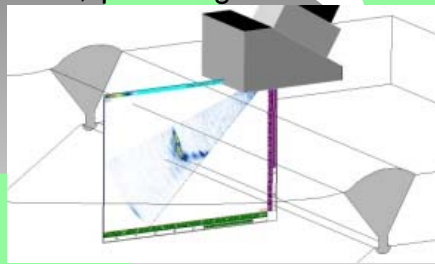


Pipelines are a critical part of our civil infrastructure. Safety and reliability are of the utmost importance. The potential for safety and environmental risks can be minimized through routine In-Line Inspections using Smart Tool Technologies or "Smart PIGS" (Pipe Inspection Gages). Problems and results identified from using these Technologies need to be validated and analyzed in the form of **Pipeline Integrity Assessment** digs.

NGI are leaders in Pipeline Integrity Assessments, providing a first-class service with unparalleled experience and expertise.

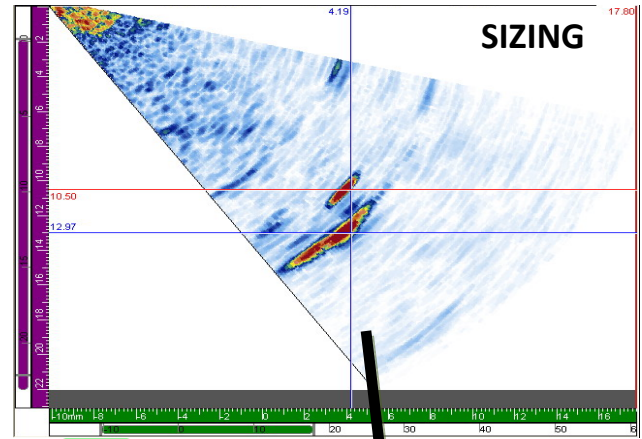
PIPELINE INTEGRITY SERVICES:

- Advanced crack sizing using PA, Tofd, Tip Diffraction, High Angle LW
- Corrosion Mapping - Internal/External & Manufacturing Metal-Loss
- Automated UT Services (AUT)
- CWB Sleeve Certified Sleeve Inspections
- Coating Assessments and Inspections
- DSAW/FW/ERW Seam Evaluation and Flaw Characterization
- Visual, Magnetic Particle, Ultrasonic & Hardness Testing
- Full Defect Assessment and Mapping on ID/OD, Deformations, Mechanical Damage, Cracking, SCC, Long Seam Flaws, Arc Burns & Manufacture anomalies
- CE Samples and Grind Repairs
- Correlation and interpretation of ILI Targets to as found conditions

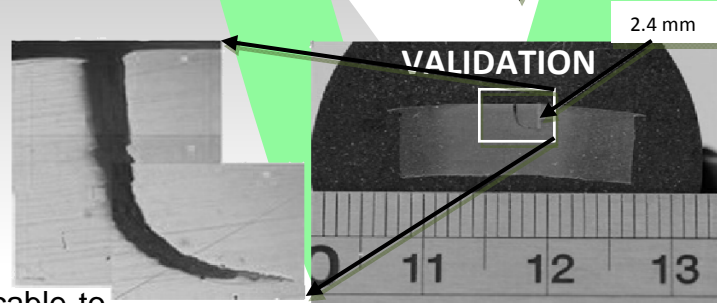
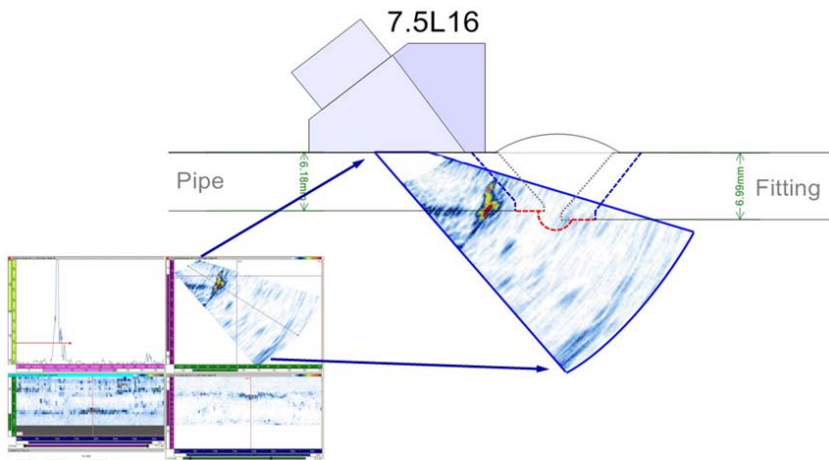
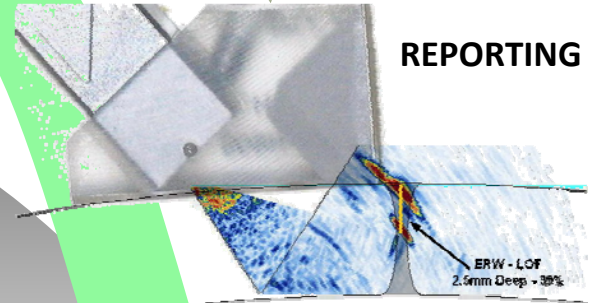


PIPELINE INTEGRITY

LONGSEAM & GIRTH WELD ASSESSMENT

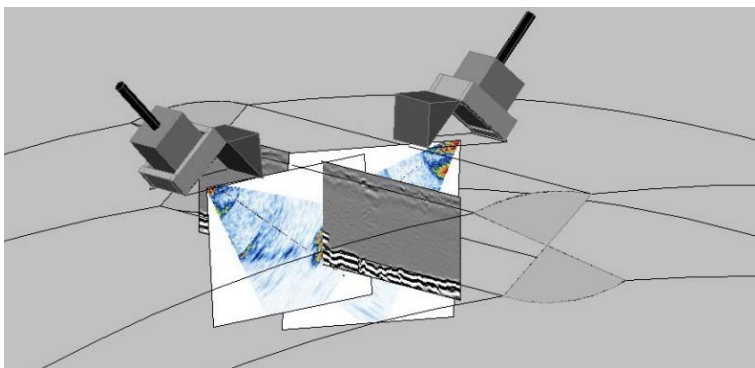


NDT Group Inc. provide accurate assessments of Longitudinal Weld Seam and Girth Welds. Our flaw detection practices and sizing techniques utilize Conventional UT and/or Advanced UT Technologies to characterize in-service discontinuities and welding/processing related anomalies.



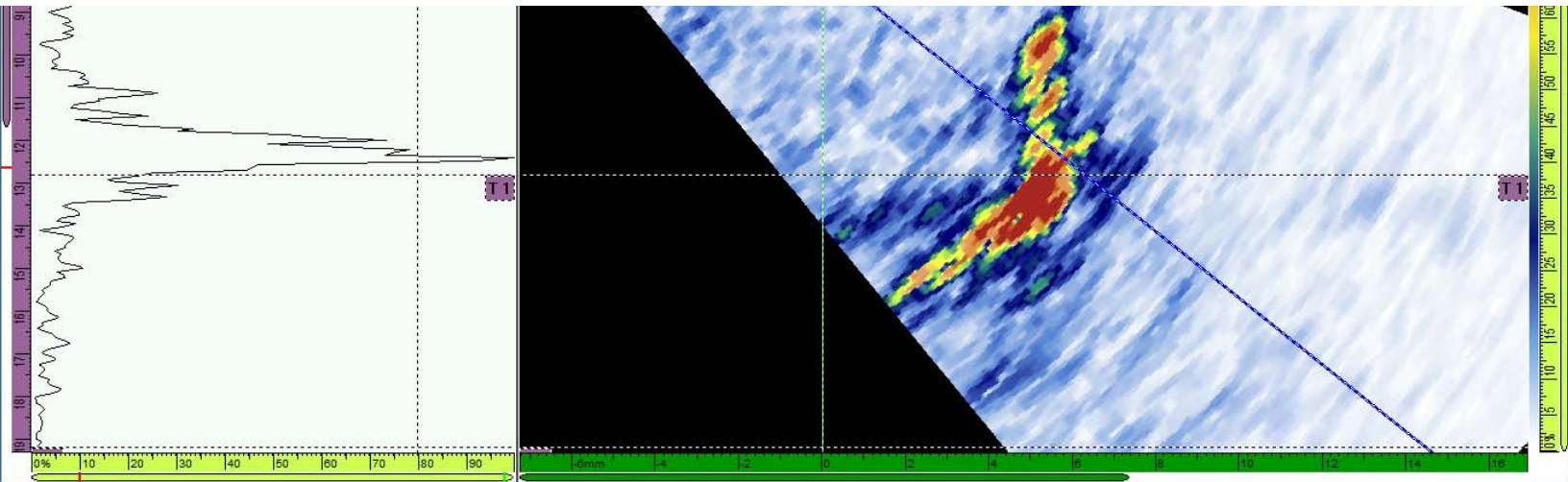
Our in-service inspection methods and techniques are applicable to many configurations in numerous industries. We work closely with our Clients and Engineering to provide solutions suitable for Fitness for Service (FFS).

Reliable crack-detection and in-service examinations can be a challenging task for many clients. Accurate flaw disposition and crack sizing is critical. **NGI** have the training, experience and know-how through R&D and proven results in the field. We provide unique and innovative solutions to Pipeline Integrity, Power Generation and Petro-chemical Industries.



ADVANCED UT SERVICES

PHASED ARRAY & TOFD



Advanced UT Technologies provide an innovative solution to many unique and difficult geometries and applications. Services range from ASME code-compliant weld examinations to the detection of in-service defects in of Piping, Forgings, Tanks and Pressure Vessels. Phased Array, Time-of-Flight Diffraction and other Advanced UT Techniques are valuable tools that have great benefit. Our specialty is complex geometries, Advanced PA & Tofd techniques.

ADVANCED UT – PA & TOFD:

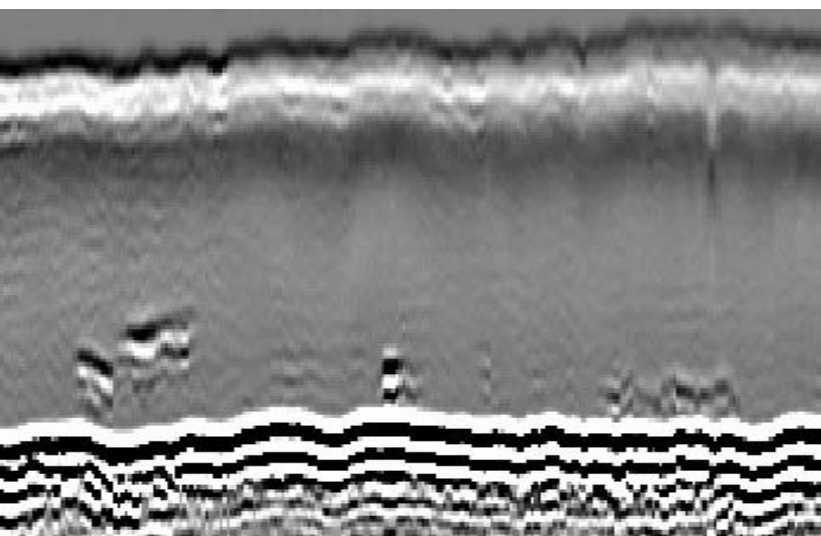
- ASME Code Compliant PA & Tofd
- Advanced PA of Complex Geometries
- Advanced UT Techniques
- Crack Detection & Sizing
- High Angle LW
- Creeping Wave
- Stainless Steel and Austenitic Welds
- Dissimilar Metal Weld (DMW)
- Tank and Vessel Wall Climber
- High Temperature TOFD
- High Temperature Hydrogen Attack (HTHA)

DATA ANALYSIS:

- ProScan-AUT Solutions
- Tomoview-Olympus
- TD Super-View
- Ultravision-Zetec
- GE-Weld Star



**ECO FRIENDLY
TECHNOLOGY**



ADVANCED UT SERVICES

AUTOMATED UT – CORROSION MAPPING

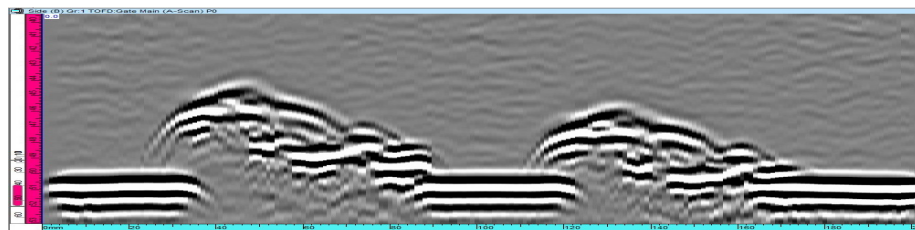
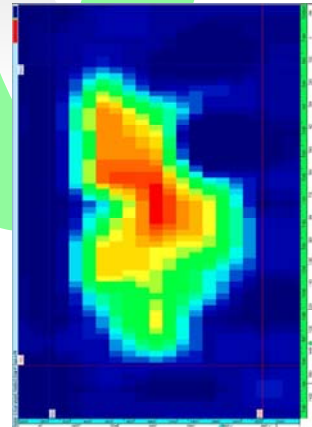
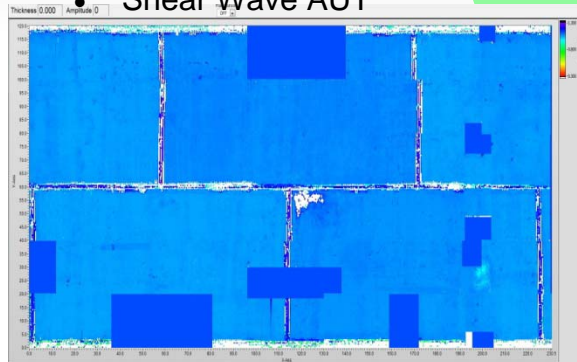


Automated UT Corrosion mapping can be a valuable corrosion assessment tool providing an image (C-Scan) of the affected area in conjunction with Burst Pressure Calculations (B31.G, MB31G and Effective Area Assessment).

AUT in Lieu of Internal Inspections can provide significant cost savings by performing condition assessment safely from the outside even while the equipment is in service. Unnecessary vessel entries can be avoided along with associated hazards and inconveniences of shutting down equipment. This service is valuable for preventive maintenance and is an effective means of detecting problems before shutdown.

AUTOMATED UT – AUT:

- Detection and Monitoring of Hydrogen Blistering
- Internal and External Corrosion Mapping
- Mapping of Laminations and
- Corrosion Mapping (Automated UT)
- Burst Pressure Calculations for FFS
- 30"/sec Scanning Capabilities
- High Temperature **AUT** (700°F)
- HIC/SOHIC and Welds
- Multi-Channel UT
- Shear Wave AUT



VISUAL INSPECTION

WELDING INSPECTION & QA/QC



Visual inspection (VT) relies upon the detection of surface imperfections using the eye. Normally applied without the use of any additional equipment, **VT** can be improved by using aids such as a magnifying glass to improve its effectiveness and scope. **NGI** provides the following services with this method:

VISUAL INSPECTION – VT:

- API 510, 570 and 653 Inspections
- Welding Inspection & Parameters
- Structural Steel Inspection
- In-Service Inspections
- NDT Vendor Auditing
- Vendor Surveillance
- Pipeline Inspection
- Coating Inspection
- QA/QC Services



NONDESTRUCTIVE TESTING

CONVENTIONAL NDT SERVICES



Nondestructive Testing (NDT) services directly contribute to the safety of society. Quality assurance and integrity of critical equipment and facilities are instrumental in the protection of the environment, public health, and life itself. Failure modes result in negative social, financial, and environmental, implications.

The following are the **NDT** methods that we currently provide to evaluate materials, components, and welds:

CONVENTIONAL NDT - METHODS:

- Ultrasonic Testing (UT) - *Specialists in Nickel & Stainless Steel Alloys*
- Magnetic Particle Testing (MT)
- Liquid Penetrant Testing (PT)
- Eddy Current Testing (ET)
- Radiography (RT) Film Review
- NDT Consulting & Auditing



SAFETY & ENVIRONMENT



NDT Group Inc. dedicated to maintaining a high standard of Health, Safety and Environmental performance. We believe that all work related injuries and illnesses are preventable. We are committed to maintaining occupational health and safety into all our business decisions to ensure the highest regard to safety of our workforce and the public. Our goal is to lead the industry in minimizing the impact of our NDT activities and promote a service line that has minimal effects on the environment.



ECO FRIENDLY
TECHNOLOGY

CONTACT INFORMATION:

20 ROY BLVD. UNIT 29
BRANTFORD, ON
N3R 7K2

PHONE: 1.519.304.9199
FAX: 1.519.304.8199

