



NDT Group Inc.

Nondestructive Testing and
Inspection Services

Reliability and Integrity

WHAT IS NDT?

NONDESTRUCTIVE TESTING (NDT) supports the secure and reliable function of your assets by in essence making the invisible visible, detecting small defects before they could potentially result in failure, unscheduled breakdown or damage.

WHO WE ARE

NDT Group Inc. is an NDT and Inspection Services Agency located in Ontario, Canada. We provide all of Canada with reliable state of the art **NDT services such as:**

- Advanced Nondestructive Testing
- Welding Inspection
- Pipeline Integrity
- Nondestructive Testing
- Lifting Equipment Inspection and Certification



INDUSTRY SECTORS WE SERVICE:

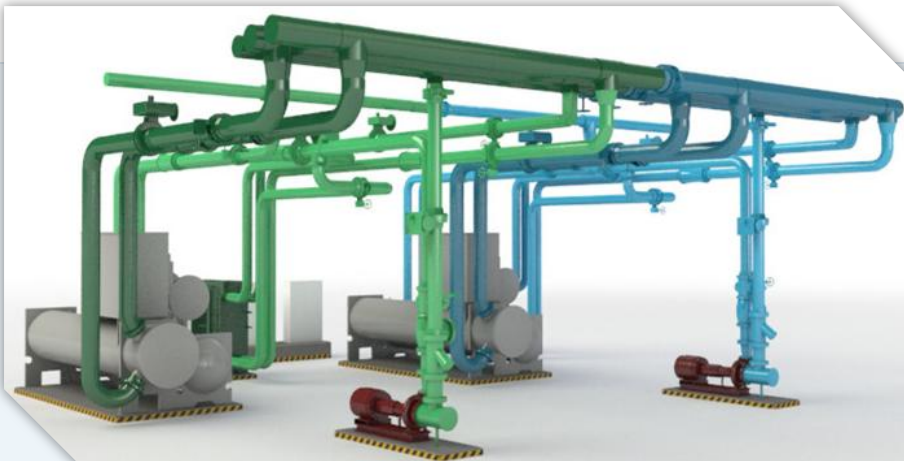
- Oil & Gas
- Hoisting and Lifting Equipment
- Pipelines
- Power Generation
- Manufacturing and Fabrication
- Fabrication and Manufacturing

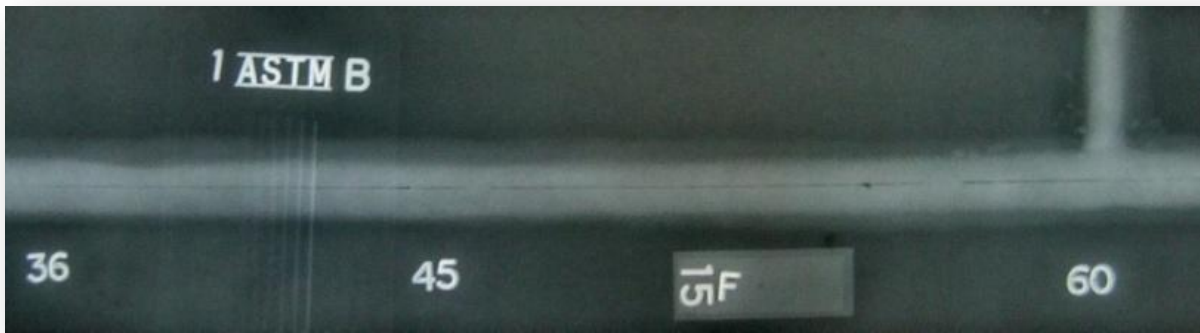
OUR MISSION

We are a recognized leader in NDT and inspection related services, our goal is to maintain excellence by exceeding our client expectations and provide long term value to customers.

OUR VISION

We provide solutions to all industry sectors to help ensure their assets and products meet industry standards ensuring quality, environmental and health and safety .





OUR SERVICES

NDT Group Inc. (NGI) provides Nondestructive Testing and Inspection services for industrial sector in Canada and across the world.

Our company offers a combination of advanced, innovative and basic NDT Technologies, distinguished itself as first-class provider.



NDT Group Inc. is certified to CSA W178.1



Ultrasonic



Liquid Penetrant



Eddy Current



Radiography



Visual Inspection



Magnetic Particle

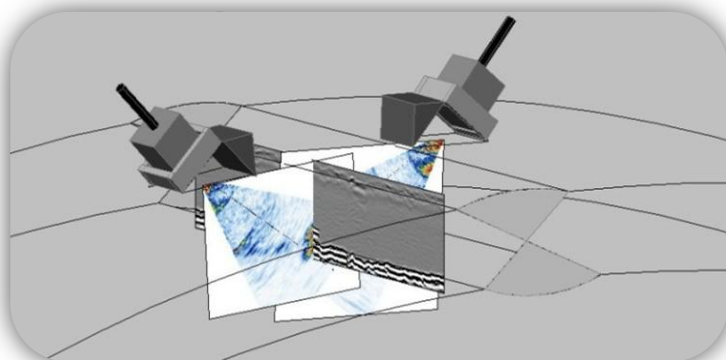




Ultrasonic

Ultrasonic Testing (UT) is a nondestructive inspection method that uses high frequency sound waves (ultrasound) that are above the range of human hearing, to measure geometric and physical properties in materials. One of the primary benefits of UT is that it is considered to be a truly volumetric test. UT is capable of determining not only the length and location of a flaw, but it will also provide information as to the type of flaw found.

NDT Group Inc. provides the following services with this technique:



ADVANCED UT

- Corrosion Mapping (AUT C-Scan)
- AUT HIC/SOHIC C-Scan and Welds
- Advanced UT Techniques
 - High Temperature AUT
 - Creeping Wave
 - Stainless Steel and Austenitic Welds
 - Dissimilar Metal Weld (DMW)
 - High Temperature TOFD



APPLICATIONS

- Pipeline Girth Welds
- AUT in lieu-of Internal Inspections
- Sizing of Stress-Corrosion Cracking
- Thin-walled Austenitic Welds
- Dissimilar Metal Welds
- UT In-Lieu of RT
- Heavy Wall and Complex Geometries
- Customized Applications



CONVENTIONAL UT

- Crack Sizing
- Immersion Testing
- Shear Wave Weld Inspection
- RAW Material and Manufactured Products
- High Temperature UT
- Thickness Measurement



Liquid Penetrant

Liquid Penetrant Testing (PT) reveals surface flaws by the "bleed-out" of a penetrating medium against a contrasting background. This is done by applying penetrant to the pre-cleaned surface and flaw of the item being inspected. The penetrant liquid will be drawn into any surface opening by capillary action. Following removal of excess penetrant an application of a developer reverses the capillary action and draws penetrant from the flaw. The resultant indications reveal the presence of the flaw so that it can be visually inspected and evaluated.

We provide the following services with this method:

- Visible penetrant.
- Fluorescent penetrant.
- High Temperature



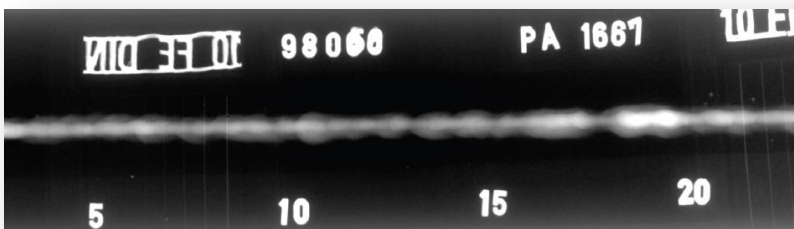
Eddy Current

In **Eddy Current Testing (ET)**, a coil carrying an AC current is placed close to the specimen surface, or around the specimen. Flaws and material variations in the specimen affect the strength of the eddy currents. The presence of flaws, etc. is therefore measured by electrical changes in the exciting coil.



Radiography

Radiography (RT) is a nondestructive inspection method based on using short wavelength electromagnetic radiation passing through the material. Materials with areas of reduced thickness or lower material density allow more, and therefore absorb less, radiation. The radiation, which reaches the film after passing through the material, forms a shadow image on a photographic film (radiograph).





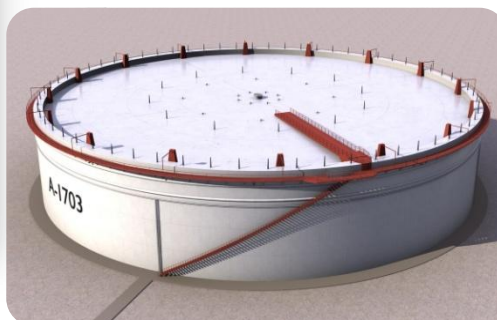
Visual and Welding Inspection



Visual Inspection (VT) relies upon the detection of surface imperfections using the eye or remotely using borescopes or videoscopes. Normally applied without the use of any additional equipment, VT can be improved by using aids such as a magnifying glass and white light to improve its effectiveness and scope.

NDT Group Inc. provides the following services with this method:

- Structural Steel Inspection
- Welding Inspection
- In-Service Inspection



Magnetic Particle

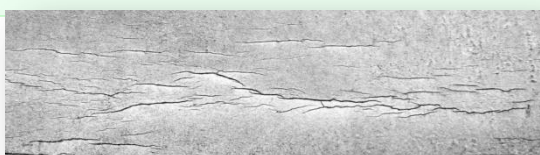
Magnetic Particle Testing (MT) is used to locate surface and slight subsurface discontinuities in ferromagnetic materials. Such flaws present in a magnetized part will cause a magnetic field to leave the part. If magnetic particles are applied to this surface, they will be held in place by the flux leakage to give a visual indication.

NDT Group Inc. provides the following services with this method:

- Yokes
- Direct current (AC) yokes
- Portable Alternated Current (AC) yokes

Magnetic Particles

- Dry powder
- Wet Particles (Fluorescent, Colour Contrast)



LIFTING EQUIPMENT



Our competent team of inspectors and engineers can provide support on the inspection and nondestructive testing of wire rope, wear pads, rigging, hydraulic cylinders, sheaves, outriggers, boom sections and more.

We can provide Engineered Weld repair or Alteration procedures considering the metallurgical and mechanical properties of the affected material. Our comprehensive reports with clear results and prompt service put us ahead in the industry. We offer annual inspections and certifications by Professional Engineer if required.

PIPELINES



We are leaders and innovators in Pipeline Integrity NDE Assessment, providing world-class service with unparalleled experience and expertise.

- Advanced crack sizing using PA, Tofd, Tip Diffraction, High Angle LW.
- Corrosion Mapping / Metal-Loss, AUT C-Scan and Laser Mapping
- CWB Sleeve Certified Sleeve Inspections.
- Coating Assessments and Inspections.
- DSAW/FW/ERW Seam Evaluation and Flaw Characterization.
- Full Defect Assessment and Mapping on ID/OD - Deformations, Mechanical Damage, Cracking, SCC, Long Seam Flaws, Arc Burns & Manufacturing related anomalies. ILI Target correlation.
- CE Samples and Grind Repairs.
- RT new construction welds, Mainline and Distribution

POWER GENERATION



Power Generation is a fundamental component of our civil infrastructure and everyday life. Reliability of these plants and protection are of the greatest importance. Problems identified from these inspections can help prevent unscheduled shutdowns and help trend problems so they can be safely monitored and tracked.

- Turbine Component Inspections, PAUT and MT
- 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.
- High Energy piping Inspections for Creep Cracking

PULP AND PAPER



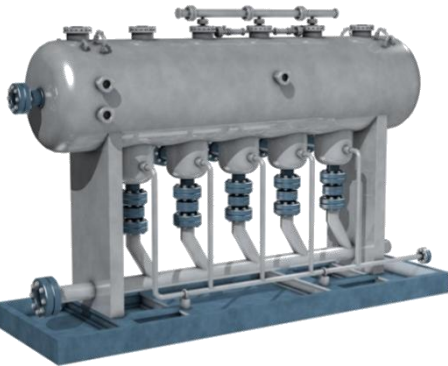
Pulp and Paper Mills have many damage mechanisms, reliable operations require routine Shut-Downs to avoid unplanned outages and failures. Our technicians are experts in the inspection Pulp & Paper equipment, boilers, vessels and piping:

- Digester and Ancillary Vessel Inspections
- Paper Machine Components, Dryer Cans, Suction and Couch Rolls
- Recovery and Power Boilers, Steam Lines & Deaerators
- AUT/PA/Tofd In-lieu of Internal Inspections of Tanks and Pressure Vessels
- Evaporator Effects Inspections, Piping, Vessels and Tank Inspections
- Lifting Equipment Inspections

MINING

Mining Industries play an integral part in supplying the basic building blocks of many of the goods we use and manufacture. Safety and environmental risks can be minimized through routine inspections of critical Assets such as:

- Hoists, Mills, Conveyances, Crushers, Tanks and Process Piping.
- Smelters and Acid Plants, Absorbers, Converters, Exchangers and Furnaces.
- General Piping, Vessels and Tank Inspections.
- Lifting Equipment Inspections, Scissor Trucks.
- Phased Array UT of Gear Teeth.

FABRICATION AND MANUFACTURING

Many fabrications involve the use of plate, forgings, castings, pipe and tubing. Our experience ranges from the inspection of raw building materials to the NDT of the final welded or manufactured product. As a result, our services contribute to the world-class products that meet or exceed client or code requirements for safety and quality.

- 3rd Party Inspection, NDE Review/Auditing of Repairs and Construction projects.
- General Piping, Vessels and Tank Inspections.
- Hardness Testing and PMI using XRF.
- Structural Steel Inspections.
- CWB Welding Inspectors.
- Radiography of Piping/Vessel Welds

OIL & GAS / PETROCHEMICAL

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.

- Phased Array UT/AUT for detection of HIC, SOHIC,
- Blistering and HTHA Inspections.
- AUT C-Scan Corrosion Mapping
- DMW UT examinations.
- General Piping, Vessels and Tank Inspections.
- API QUTE, QUSE and QUPA certified.
- RT Corrosion shots

TRANSPORTATION

NDT Group Inc. offers timely, and cost effective solutions within the transportation industry. We perform quality assurance inspections to critical components and provide advanced NDT techniques that meet the needs of manufacturers and suppliers. Through our meticulous standards, and superior customer service, our work is distinctive.



Lifting and Hoisting Equipment consist of a wide array of devices providing critical and essential services to all types of industries. Our nondestructive testing methods can detect cracks that may be a safety hazard not visible to the naked eye. Our competent team of inspectors and engineers can provide support on the inspection and non-destructive testing of wire rope, wear pads, rigging, hydraulic cylinders, sheaves, outriggers, boom sections and more.

We can provide Engineered Weld repair or Alteration procedures considering the metallurgical and mechanical properties of the affected material. Our comprehensive reports with clear results and prompt service put us ahead in the industry that others try to imitate.

Inspection Codes/Standards:

- **CSA B167** Overhead travelling cranes - Design, inspection, testing, maintenance, and safe operation.
- **CSA B225** Vehicle-mounted aerial devices.
- **CSA B335** Safety standard for lift trucks.
- **CSA B354** Self-Propelled Boom-Supported Elevating Work Platforms.
- **CSA C225** Vehicle-mounted aerial devices.
- **CSA Z150** Safety code on mobile cranes and articulating boom cranes.
- **CSA Z151** Concrete pumps and placing booms.
- **NFPA 1914** Standard for testing fire department aerial devices.
- **ASME B30** Installation, operation, inspection, testing, and maintenance of cranes and related equipment.



Typical Lift Inspection Components

- Lifting Beams and Spreader Bars
- Mobile and Overhead Cranes
- Material Handling Equipment
- Hoists and Manlifts
- Mobile Equipment
- Knuckle Booms
- Manbaskets
- Chainfalls
- Forklifts



100% Canadian

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