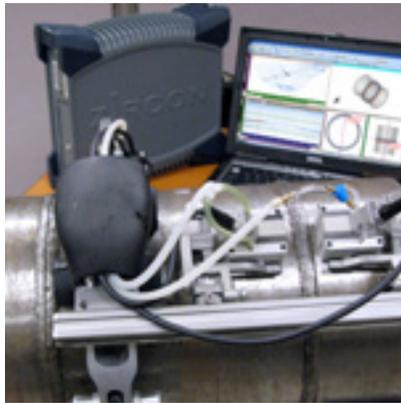


Structural Integrity
Associates, Inc.®

NONDESTRUCTIVE EXAMINATION (NDE) SERVICES





TECHNICAL SUPPORT UNIT – NONDESTRUCTIVE EXAMINATION

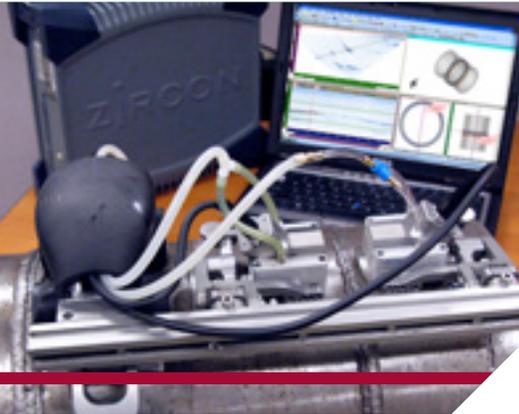
Innovative | Fully Integrated | Industry-leading | Advanced Skills |
Dedicated Professionals

For nearly two decades, Structural Integrity has been recognized as one of the global leaders in development and implementation of advanced nondestructive examination (NDE) technologies. In response to a number of industry related issues, we developed and delivered through our Technical Support Unit advanced ultrasonic solutions based on the digital processing capabilities of our TestPro™ ultrasonic imaging system and Focus Array Transducer System™ annular phased array focusing system.

Advancements available through these systems leading to the detection of incipient level (i.e., pre-cracking) material degradation have not been reproduced or accomplished by any other NDE service provider in the energy market.

Today Structural Integrity's Technical Support Unit has grown to become the leader in advanced ultrasonic testing technologies through expansion, qualification and implementation of NDE solutions in almost every sector of the energy market. Capitalizing on our ability to integrate engineering and materials expertise into our service offerings, NDE technologies including Time of Flight Diffraction (TOFD), Annular Phased Array (A-PAUT), Linear Phased Array (L-PAUT), long range Guided Wave testing (GWT), Electromagnetic Acoustical testing (EMAT), as well as traditional NDE applications are regularly provided by our technical staff.

Providing innovative fully integrated solutions that meets your needs for continued reliable operation is our goal.



TSU FOSSIL NDE

Structural Integrity is an industry leader for providing integrated assessment solutions for managing aging assets in fossil fuel generating stations. Our field services teams are comprised of dedicated engineering and NDE professionals trained and qualified in the skills that match the specific needs of our clients.

Our combination of analytical, materials and advanced NDE technologies has separated SI from the rest of the NDE industry when delivering phased array and time of flight diffraction ultrasonic testing services for boiler tubing, piping and heavy wall components for nearly two decades.

From traditional NDE examination services including standard UT, MT and PT, to more advanced specialized applications, Structural Integrity Fossil NDE group has the technology and ability to deliver a complete component assessment addressing your specific plant needs.



TSU TURBINE-GENERATOR NDE

Structural Integrity's TSU Turbine-Generator NDE unit takes an integrated approach to plant asset management and reliability improvement within the power generation and related energy industries. Utilizing analytical, metallurgical, and advanced NDE tools, we provide our clients with the necessary information for managing risk of critical rotating and pressure retaining equipment. We offer this specialized service by maintaining a highly skilled staff of engineering and technical professionals who are actively involved in solving materials evaluation issues affecting power plant integrity and reliability. This integrated approach has enabled us to focus on providing comprehensive NDE inspections of critical turbine-generators components to detect and characterize incipient damage. The NDE results are the basis for subsequent analytical and metallurgical evaluations.

TSU NUCLEAR NDE

Structural Integrity delivers innovative nuclear NDE services addressing some of the industries emergent issues through our dedicated and experienced engineering and NDE professionals. Our focus on specific nuclear power plant issues allows us to offer more advanced nondestructive examination solutions that have not been broadly adopted for general In-service Inspection purposes. Our unique solutions embrace the advanced capabilities provided through the latest in phased array ultrasonic testing technologies. Structural Integrity’s Nuclear NDE group has led the industry in development and qualification of phased array techniques under the Section XI, Appendix VIII program including:

- *Phased Array Inspection of Weld Overlay Repairs*
- *Phased Array Inspection of Dissimilar Metal Welds*
- *Phased Array Inspection of Optimized Weld Overlay Repairs*

New inspection technologies are continually developed by our NDE applications group, and its top-notch technical staff is dispatched to conduct inspections with these and other state-of-the-art NDE technologies worldwide. Nondestructive examination services available specifically for nuclear plants include:

- *Austenitic/ferritic Piping Inspections*
- *Vessel Shell Inspections*
- *Dissimilar Metal Weld Inspections*
- *Weld Overlay Repair Inspections*
- *Code Compliant Ultrasonic Inspections*
- *Difficult to Inspect Configurations*

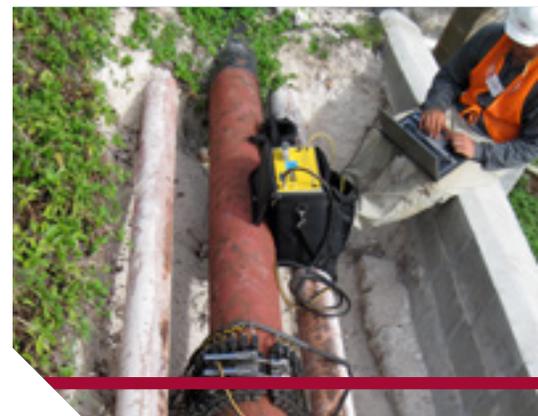
TSU GUIDED WAVE TECHNOLOGIES

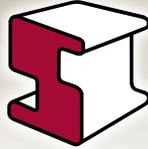
Through the use of state-of-the-art technology, comprehensive personnel training, superior written procedures, and in-house expertise, Structural Integrity’s Guided Wave Technologies group has demonstrated our position as an industry leader in the development and application of advanced guided-wave testing services and solutions. Guided Wave Testing (GWT) provides the ability to rapidly screen long lengths of piping to detect internal or external wall thinning and is a proven method for assessing the condition of buried, insulated, or otherwise inaccessible piping in the nuclear, fossil, natural gas, oil, and other industries. Some examples typically provides GWT include:

- *Road/Rail/River Crossings*
- *Above-Ground Insulated or Inaccessible piping*
- *Buried Piping*
- *Corrosion Under Insulation*
- *Corrosion Under Supports*
- *Touch-Point/Crevise Corrosion*
- *Weld Location*
- *Permanent Installed Monitoring*

We have been at the forefront of guided wave technology from the very early stages and have continued our pioneering efforts through the early adoption of other GWT technologies such as Permanently Installed Monitoring Systems (PIMS). Furthermore, we have diversified our GWT technology capability through the ownership and operation of all the major equipment brands; each with unique capabilities that may be suited to a specific application.

With an experienced engineering team dedicated to the development of new GWT solutions for piping and other critical components, a world-class team of technicians to implement the technology, and some of the industry’s most advanced reporting capabilities; Structural Integrity is continuously adding value to our GWT service offerings with a strong focus on quality. Our GWT specialists are also qualified to conduct bell-hole examinations in accordance with industry standards and are certified in accordance with ASNT and EPRI guidelines for a variety of other advanced ultrasonic NDE methods.





Structural Integrity
Associates, Inc.[®]

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