# Dossier: NON-CONTACT TECHNOLOGIES LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,771.00

**Award Date:** 2023-12-12

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Non-Contact Technologies LLC (NCT) specializes in advanced non-destructive testing (NDT) solutions for the aerospace and defense industries, focusing on increasing inspection speed, accuracy, and safety. Their core mission is to provide innovative, contactless measurement systems that enhance the structural integrity assessment of critical components, particularly composite materials, through improved data quality and automation. NCT aims to solve the limitations of traditional NDT methods, such as contact-based probes, which can be slow, susceptible to human error, and potentially damaging to delicate structures. Their unique value proposition lies in their patented laser-based ultrasonic (LBU) technology that enables rapid, full-field inspection of complex geometries without physical contact, significantly reducing inspection time and improving defect detection capabilities compared to conventional techniques.

**Technology Focus:**

* Laser-Based Ultrasonic (LBU) Inspection:\*\* NCT utilizes a pulsed laser to generate ultrasonic waves within a material, and a separate laser system to measure the resulting surface vibrations. This allows for rapid scanning and full-field imaging of defects like delaminations, porosity, and impact damage in composite materials.
* Integrated Software Platform:\*\* NCT provides a proprietary software suite for data acquisition, processing, analysis, and visualization of LBU inspection results. This software enables automated defect detection, reporting, and integration with existing quality control systems. The software can handle complex data sets and provide actionable insights for structural health monitoring.

**Recent Developments & Traction:**

* Phase I STTR Award (2023):\*\* NCT received a Phase I Small Business Technology Transfer (STTR) award from the Air Force Research Laboratory (AFRL) to develop advanced laser-based ultrasonic inspection technology for additively manufactured (AM) aerospace components. This project highlights NCT's growing involvement in addressing the inspection challenges associated with emerging manufacturing techniques.
* Continued Development of LBU System:\*\* Continued to enhance the speed and resolution of its LBU inspection system, as evidenced by updates to their website and related promotional materials. This suggests ongoing improvements in data acquisition and analysis capabilities.

**Leadership & Team:**

* Information unavailable from web search.

**Competitive Landscape:**

* Laser Technology, Inc.:\*\* Provides laser-based measurement and positioning solutions. NCT differentiates itself by its specific focus on ultrasonic inspection for aerospace and defense applications, whereas Laser Technology, Inc. has a broader market focus.
* Olympus Corporation:\*\* Offers a wide range of NDT solutions, including ultrasonic testing equipment. NCT's key differentiator is its specialization in contactless laser-based ultrasonic (LBU) technology, which offers advantages in speed, automation, and applicability to complex geometries and composite materials, compared to Olympus' more traditional contact-based ultrasonic solutions.

**Sources:**

1. [https://www.nstnano.com/laser-ultrasonics](https://www.nstnano.com/laser-ultrasonics)

2. [https://sbir.defensebusiness.org/](https://sbir.defensebusiness.org/) (Search for Non-Contact Technologies)

3. [http://www.dtic.mil/dtic/tr/fulltext/u2/a623900.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a623900.pdf)