# Dossier: LSP Technologies, Inc.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,249,877.00

**Award Date:** 2023-06-30

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

LSP Technologies, Inc. is a US-based company specializing in laser peening technology and services to improve the fatigue life, performance, and reliability of critical metal components used in aerospace, energy, and other demanding industries. Their core mission is to provide solutions that significantly enhance material properties, reduce manufacturing costs, and extend the service life of manufactured parts by preventing premature failure due to fatigue, corrosion, and other forms of material degradation. Their unique value proposition lies in providing a non-destructive surface treatment that creates deep compressive residual stress layers within the material, significantly increasing its resistance to cracking and fatigue. They offer both laser peening services using their own proprietary equipment and the sale of laser peening systems.

**Technology Focus:**

* Laser Peening: Utilizes high-energy, pulsed lasers to generate shock waves that induce compressive residual stresses deep beneath the surface of metallic components. This process can extend fatigue life by 5-10 times and increase resistance to stress corrosion cracking.
* Laser Bond Inspection (LBI): A non-destructive inspection method using lasers to evaluate the integrity and strength of bonded joints in aerospace and other critical applications. LBI can detect voids, disbonds, and other defects with high sensitivity.

**Recent Developments & Traction:**

* May 2022:\*\* LSP Technologies, Inc. was awarded a Phase II SBIR grant from the National Science Foundation (NSF) to develop a laser-based additive manufacturing process for fabricating complex 3D metal parts.
* November 2021:\*\* LSP Technologies announced that its Laser Bond Inspection system was successfully used for inspecting the adhesive bond of large aircraft structures.
* January 2020:\*\* LSP Technologies was awarded a contract from the US Army Research Laboratory to develop laser peening techniques for improving the ballistic performance of lightweight armor materials.

**Leadership & Team:**

* Jeff Dulaney (President & CEO):\*\* Possesses extensive experience in laser materials processing and has led the company's strategic growth and technology development for many years.
* Dave Gnizak (Chief Scientist):\*\* A recognized expert in laser peening technology with numerous publications and patents in the field.

**Competitive Landscape:**

* Metal Improvement Company (MIC):\*\* A division of Curtiss-Wright, offering a broader range of surface enhancement technologies including shot peening. LSP Technologies differentiates itself through its focused expertise in laser peening and its ability to generate deeper compressive stress layers than traditional methods.
* Prima Power Laserdyne:\*\* Offers laser processing systems, including those adaptable for laser peening, but may not offer the same level of specialized expertise and service focus on laser peening applications as LSP Technologies.

**Sources:**

* [https://www.lsptechnologies.com/](https://www.lsptechnologies.com/)
* [https://www.sbir.gov/sbirsearch/detail/2125445](https://www.sbir.gov/sbirsearch/detail/2125445)
* [https://www.marketsandmarkets.com/Market-Reports/laser-peening-market-97792228.html](https://www.marketsandmarkets.com/Market-Reports/laser-peening-market-97792228.html)