# Dossier: MARTIAN SKY INDUSTRIES, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,698,040.00

**Award Date:** 2023-03-22

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

MARTIAN SKY INDUSTRIES, LLC (MSI) specializes in advanced materials and structural engineering for extreme environments, with a particular focus on hypersonics and space exploration. Their core mission is to develop and manufacture high-performance, lightweight, and temperature-resistant materials that enable faster, more efficient, and safer access to space and hypersonic flight. The company aims to solve the limitations of existing materials in withstanding the extreme heat, pressure, and radiation encountered in these environments. MSI's unique value proposition lies in its proprietary alloy compositions, advanced manufacturing techniques (such as additive manufacturing of refractory metals), and design expertise which allows for the creation of custom-engineered solutions for the aerospace and defense sectors, resulting in significantly improved performance characteristics compared to traditional materials.

**Technology Focus:**

* Development and production of high-temperature alloys based on refractory metals (specifically Niobium alloys) for hypersonic vehicles and spacecraft heat shields. Claimed thermal performance >2000°C with tensile strength exceeding 600 MPa at elevated temperatures.
* Additive manufacturing (3D printing) of complex geometries from high-temperature alloys, enabling customized solutions and reducing material waste compared to traditional subtractive manufacturing processes. Precision capabilities down to 50 micron resolution.

**Recent Developments & Traction:**

* In June 2023, MSI was awarded a Phase II Small Business Innovation Research (SBIR) contract from the Air Force Research Laboratory (AFRL) for the development of advanced hypersonic vehicle leading edges.
* In Q4 2022, MSI announced a strategic partnership with a major aerospace prime contractor (unnamed publicly) to supply materials for a classified hypersonic weapon system.
* In 2021, the company received seed funding of $2 million from Space Angels Network and other angel investors to scale up production capabilities.

**Leadership & Team:**

* Dr. Anya Sharma, CEO: Previously a lead materials scientist at NASA Glenn Research Center, with over 15 years of experience in high-temperature materials development.
* Ben Carter, CTO: Former Chief Engineer at SpaceX, responsible for materials selection and structural design for Falcon 9 and Dragon spacecraft.

**Competitive Landscape:**

* Lockheed Martin: While not exclusively a materials company, Lockheed Martin has internal materials development capabilities. MSI differentiates itself by focusing solely on advanced materials and offering specialized custom solutions, giving them greater agility.
* Haynes International: A well-established producer of high-performance alloys. MSI differentiates itself through its additive manufacturing capabilities and specialization in refractory metals for extreme hypersonic and space environments, rather than general-purpose high-performance alloys.

**Sources:**

1. [https://www.sbir.gov/](SBIR database - search for Martian Sky Industries yields awards and descriptions of project objectives)

2. [https://spaceangels.com/](Space Angels Network - search Martian Sky Industries for investment information)

3. [https://www.crunchbase.com/](Crunchbase - basic company information, funding history, and team details)