# Dossier: HERMEUS CORP

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,248,949.20

**Award Date:** 2024-08-13

**Branch:** SDA

## AI-Generated Intelligence Summary

**Company Overview:**

Hermeus Corporation is a privately held aerospace company focused on developing hypersonic aircraft for both commercial and defense applications. Their primary mission is to revolutionize air travel by creating aircraft that can significantly reduce flight times, potentially shrinking transoceanic journeys from hours to minutes. The company aims to address the limitations of existing subsonic and supersonic aircraft by developing technology that allows for sustained hypersonic flight (Mach 5+). Hermeus's unique value proposition lies in its focus on developing reusable hypersonic aircraft, addressing challenges of cost and operational efficiency that have historically hindered the widespread adoption of hypersonic technology. They aim to leverage a combination of proprietary engine technology and streamlined manufacturing processes to build affordable and practical hypersonic aircraft for a range of applications.

**Technology Focus:**

* Chimera Engine:\*\* Hermeus is developing the Chimera engine, a turbine-based combined cycle (TBCC) engine. This engine is designed to operate efficiently at both subsonic and hypersonic speeds. The TBCC design combines a turbine engine for lower speeds with a ramjet or scramjet for hypersonic speeds, allowing seamless transition between the two modes of propulsion.
* Quarterhorse Aircraft:\*\* This is an uncrewed autonomous aircraft designed for flight testing. The Quarterhorse will be powered by the Chimera engine and is intended to demonstrate reusable hypersonic flight capability. It will serve as a platform to mature the technology and gather flight data relevant to future hypersonic aircraft designs.

**Recent Developments & Traction:**

* August 2022: Air Force Award.\*\* The U.S. Air Force awarded Hermeus a $30 million contract to continue development of the Quarterhorse and to mature hypersonic technology for defense applications. This award follows a previous contract demonstrating confidence in Hermeus' capabilities.
* February 2023: Chimera Engine Testing.\*\* Hermeus successfully completed initial ground testing of the Chimera engine prototype, achieving sustained operation and gathering crucial data on engine performance and stability.
* December 2023: Partnership with L3Harris Technologies.\*\* Hermeus announced a partnership with L3Harris Technologies to collaborate on advanced avionics and mission systems for hypersonic aircraft, leveraging L3Harris's expertise in aerospace electronics and defense systems.

**Leadership & Team:**

* AJ Piplica (CEO):\*\* Co-founder and CEO with a background in aerospace engineering and experience at SpaceX.
* Skyler Shuford (COO):\*\* Co-founder and COO with experience at SpaceX in manufacturing and operations.
* Glenn Case (CTO):\*\* CTO, previously worked at Generation Orbit Launch Services, focusing on propulsion and launch systems.

**Competitive Landscape:**

* Reaction Engines Limited:\*\* A UK-based company developing the SABRE engine, a hybrid air-breathing rocket engine designed for hypersonic flight and space access. Hermeus differentiates itself through its focus on TBCC engine technology and a staged approach using Quarterhorse to demonstrate reusable hypersonic flight.
* Boom Supersonic:\*\* While primarily focused on supersonic rather than hypersonic flight, Boom Supersonic also aims to dramatically reduce flight times. Hermeus's key differentiator is its significantly higher speed target (Mach 5+) compared to Boom's focus on Mach 2.2.

**Sources:**

1. [https://www.hermeus.com/](https://www.hermeus.com/)

2. [https://www.airforcemag.com/hermeus-aims-to-fly-quarterhorse-hypersonic-drone-this-year/](https://www.airforcemag.com/hermeus-aims-to-fly-quarterhorse-hypersonic-drone-this-year/)

3. [https://www.flyingmag.com/hermeus-teams-l3harris-hypersonic-avionic-systems/](https://www.flyingmag.com/hermeus-teams-l3harris-hypersonic-avionic-systems/)

4. [https://techcrunch.com/2021/06/09/hermeus-nabs-30m-air-force-contract-to-build-and-test-a-hypersonic-aircraft/](https://techcrunch.com/2021/06/09/hermeus-nabs-30m-air-force-contract-to-build-and-test-a-hypersonic-aircraft/)