# Dossier: INFINITE COMPOSITES, INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,624,050.82

**Award Date:** 2023-08-23

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Infinite Composites Technologies (ICT) is a US-based company specializing in the design, development, and manufacturing of lightweight, safe, and reusable composite pressure vessels for gas storage and transportation. Their primary business is focused on revolutionizing the energy storage and transportation sectors with their patented, linerless composite tank technology, which aims to replace heavier, less efficient metal tanks. ICT's core mission is to create a more sustainable future by enabling the adoption of alternative fuels like hydrogen and compressed natural gas through their cost-effective and high-performance storage solutions. Their unique value proposition lies in their ability to offer significantly lighter and more durable tanks compared to traditional metal or lined composite tanks, leading to increased payload capacity, reduced operational costs, and improved safety.

**Technology Focus:**

* Linerless Composite Tanks:\*\* ICT utilizes a patented composite overwrap and resin system, eliminating the need for a separate metallic or plastic liner. This design allows for higher pressure capabilities, greater resistance to environmental factors, and a significant reduction in weight (up to 70% lighter than steel).
* Reusable Design:\*\* ICT tanks are designed for repeated use and are fully recyclable at the end of their service life, aligning with circular economy principles. The reusable aspect is a major differentiator, particularly in applications requiring frequent refueling or gas transportation.

**Recent Developments & Traction:**

* Department of Energy Funding:\*\* In November 2023, ICT was awarded a $1.75 million grant from the U.S. Department of Energy to advance its linerless composite hydrogen storage technology for transportation applications.
* Successful Testing:\*\* ICT announced in 2022 the successful completion of burst testing on its high-pressure composite tanks exceeding 20,000 psi, demonstrating the robustness and safety of their design.
* Partnership with Hyzon Motors:\*\* ICT announced a partnership with Hyzon Motors in 2021 to develop and supply hydrogen storage tanks for Hyzon's heavy-duty fuel cell electric vehicles.

**Leadership & Team:**

* Michael Tate (CEO):\*\* Experienced entrepreneur with a background in materials science and engineering. Prior experience includes leadership roles in clean energy technology companies.
* Jesse McEntire (CTO):\*\* Technical expert in composite materials and pressure vessel design. Holds multiple patents related to composite tank technology.

**Competitive Landscape:**

* Worthington Industries:\*\* A major player in the pressure vessel industry with a focus on steel tanks, though they also offer some composite solutions. ICT differentiates itself through its linerless design and focus on reusable, sustainable solutions for alternative fuels.
* Hexagon Purus:\*\* A leading provider of composite pressure cylinders for hydrogen and other gases. ICT's key differentiator is its linerless technology, which they claim offers superior weight savings and manufacturing efficiency.

**Sources:**

* [https://infinitecomposites.com/](https://infinitecomposites.com/)
* [https://www.greencarcongress.com/2023/11/20231127-doe.html](https://www.greencarcongress.com/2023/11/20231127-doe.html)
* [https://www.h2-view.com/story/infinite-composites-completes-burst-testing-on-high-pressure-composite-tanks/](https://www.h2-view.com/story/infinite-composites-completes-burst-testing-on-high-pressure-composite-tanks/)
* [https://www.greencarcongress.com/2021/05/20210511-ict.html](https://www.greencarcongress.com/2021/05/20210511-ict.html)