# Dossier: VRC Metal Systems, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $99,995.00

**Award Date:** 2024-07-25

**Branch:** DLA

## AI-Generated Intelligence Summary

**Company Overview:**

VRC Metal Systems, LLC (VRC) is a US-based company specializing in cold spray technology for metal repair, refurbishment, and additive manufacturing. Their primary business is to provide portable and stationary cold spray systems, materials, and process development services that enable customers to repair damaged or corroded metal components without the heat-affected zone associated with traditional welding or thermal spraying processes. VRC's core mission is to extend the lifespan of critical infrastructure and equipment, reduce downtime, and lower maintenance costs for industries such as defense, aerospace, oil & gas, and manufacturing. Their unique value proposition lies in their ability to offer a cost-effective, on-site, and environmentally friendly alternative to traditional repair methods, significantly improving component durability and performance while minimizing material waste and energy consumption.

**Technology Focus:**

* VRC Metal Systems' core technology revolves around Kinetic Metallization (KM), a cold spray process where metallic powders are accelerated to supersonic speeds and impacted onto a substrate, creating a metallurgical bond without melting the materials.
* Their systems can deposit a wide range of metals and alloys, including aluminum, titanium, copper, steel, and nickel-based alloys, with coating thicknesses ranging from microns to several millimeters.

**Recent Developments & Traction:**

* In June 2022, VRC Metal Systems secured a contract from the US Navy to develop and deploy cold spray technology for shipboard repairs, aiming to reduce maintenance downtime and improve fleet readiness.
* In October 2021, VRC Metal Systems announced a partnership with the University of Akron to establish a cold spray research and development center, fostering innovation and advancing the application of cold spray technology.

**Leadership & Team:**

* Christian Vanek:\*\* CEO. Background in materials science and engineering, with experience in developing and commercializing advanced materials technologies.
* Limited publicly available information on other specific leadership team members.

**Competitive Landscape:**

* Praxair Surface Technologies (Linde):\*\* Praxair (now Linde) offers a range of thermal spray and cold spray solutions. VRC differentiates itself by focusing on portability and on-site repair capabilities, along with a strong emphasis on government and defense applications.

**Sources:**

1. [https://vrcmetalsystems.com/](https://vrcmetalsystems.com/)

2. [https://www.navy.mil/Press-Office/News-Stories/Article/3075301/navy-contract-awards-for-june-14-2022/](https://www.navy.mil/Press-Office/News-Stories/Article/3075301/navy-contract-awards-for-june-14-2022/)

3. [https://www.uakron.edu/imr/news-events/news/cold-spray-center](https://www.uakron.edu/imr/news-events/news/cold-spray-center)