

Cold-Spray Cells Expedite the U.S. Navy's Ship-Repair Process



Fiscal Year: 2021

Location: Washington Ports and other U.S. Ports

Client Support Center: GSA Region 5

Company: VRC Metal Systems, LLC

Value: \$63,269,788

Customer: U.S. Navy, Naval Sea Systems Command (NAVSEA)

Project: NAVSEA Small Business Innovation Research (SBIR) Phase III Indefinite-Delivery/Indefinite-Quantity (IDIQ) Contract for Cold-Spray Cells

The Challenge:

The U.S. Navy came to GSA in need of cost-effective and comprehensive support for ship repairs. Cold-spray technology offers a new means to meet a growing demand to restore and extend the life of critical fleet components. Transitioning technology and developing a new organic capability across the industrial base takes time and funding. As a result, the Navy was not able to fully leverage the opportunity cold-spray technology presented to support on time delivery of our nation's fleet.

The Solution:

In coordination with GSA's Assisted Acquisition Services Client Support Center in Region 5, NAVSEA selected VRC to tackle this pressing challenge to rapidly field cold-spray technology, a coating deposition process for high-quality metal repairs, developed under the Navy's Small Business Innovation Research program. Specifically, the proposed solution focused on creating cold-spray cells – a.k.a. “pop-up cells” – for repairing ship equipment using VRC's effective cold-spray technology. Situated near ports across the country, these locations can be established in 120 days, complete repairs in three weeks or less, and remain for approximately three years.

The Impact:

Cold-spray cells expedite the Navy's maintenance and repair processes. VRC's cold-spray technology is being fielded to perform repairs much faster than the previous method – enabling the Navy to resolve maintenance backlogs, improve ship conditions, and promote on-time delivery. Additionally, the “pop-up cell” concept is defining a new best practice for rapid transition of other technology-based solutions to benefit the Navy and both the organic and defense industrial base. The cell concept will continue to expand with additional cold-spray cells in other locations.