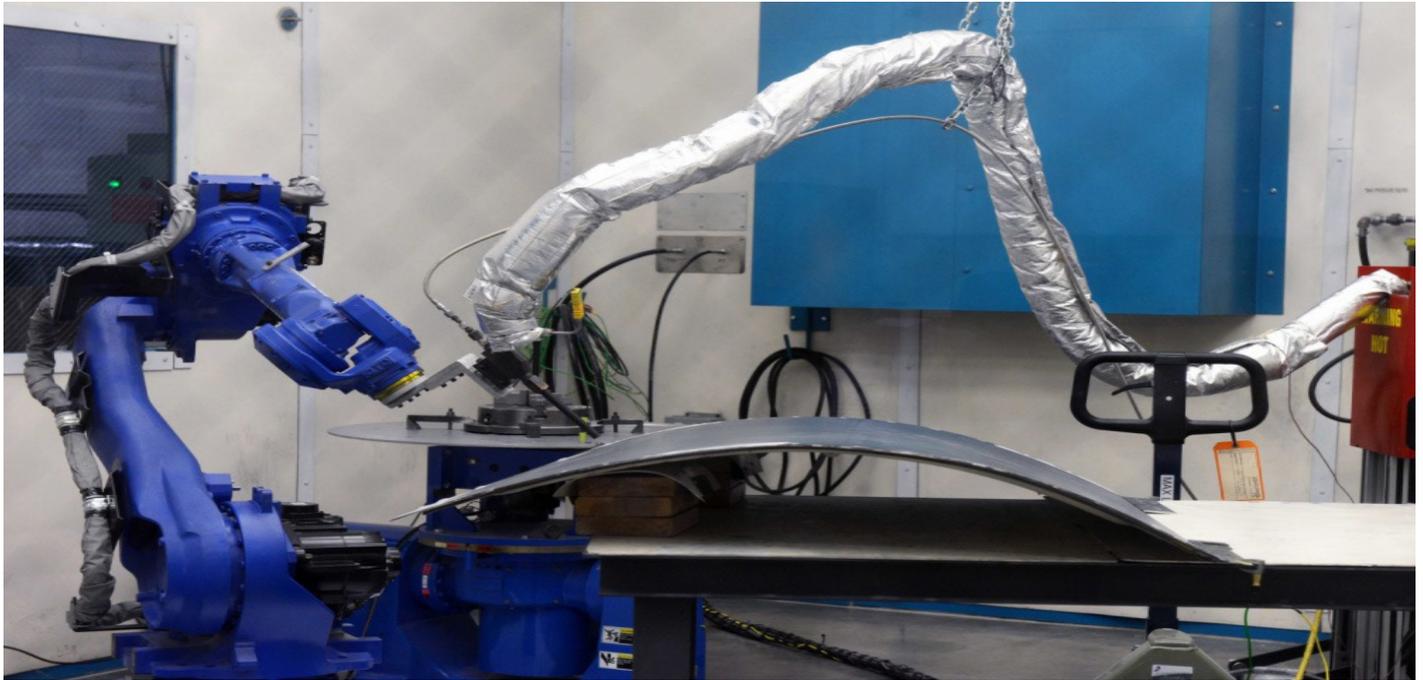


# Site Specific Cold Spray Implementation Approval and Building Best Practices for Future Implementations



*Cold spray operations with a robotic arm.*

## PROBLEM

Implementation approval for cold spray operations is a difficult effort, with no clear approval process at present. Without a clear approval process, best practices, or other guidance the safe and proper implementation of cold spray technology will be severely delayed or not occur at all. A lack of clear direction will result in the unsafe use of cold spray technology and create unnecessary environmental, safety, and occupational health (ESOH) risks as well as missing the opportunity to further implement cold spray operations cost, readiness, and performance benefits that it offers.

## OBJECTIVE

The objective of this project is to provide the Office of the Secretary of Defense (OSD), all individual Services (Air Force, Army, Navy), and other United States Government (USG) locations a means to gain facility authorization for the implementation of cold spray operations. Facility authorization may include facility ESOH staff, onsite and local fire departments, environmental management agencies, and other authorities associated with approving industrial processes at DoD facilities.



**AMERICA MAKES  
TECHNOLOGY  
DEVELOPMENT  
ROADMAP**

This project aligns to:



PROCESS

**ASTM PROCESS  
CATEGORY**  
N/A

**EQUIPMENT**  
Cold Spray

**MATERIAL**  
Powdered Metal  
Alloys

## TECHNICAL APPROACH

The National Center for Defense Manufacturing and Machining (NCDMM) is leading the effort, in partnership with Telgian Engineering & Consulting. The project approach will include discussions with operations personnel, engineering authorities, and safety and facilities management personnel coupled with on-site visits. The intent of the effort is to assess safety, facility, and environmental factors which are encountered with cold spray manufacturing operations. Examples of these factors include fire, hazardous materials, facility structural requirements, utilities, and environmental safety issues and mitigation measures. Assessments for cold spray implementation will be conducted at multiple locations and prioritized through collaboration with the Government Technical Project Manager. Implementation criteria will include consideration of various federal, state, and local regulations. The team will document lessons learned as well as a body of knowledge to initiate the development of best practices for USG use to streamline the cold spray implementation approval process.

## PROJECT START DATE

October 2021

## EXPECTED END DATE

July 2023

## EXPECTED DELIVERABLES

- Final assessment report and presentation

## FUNDING

**\$315,000 total project budget**

(\$315,000 public funding)

## PROJECT PARTICIPANTS

### Project Principal:

NCDMM

### Other Project Participants:

Telgian Engineering & Consulting

### Public Participants:

U.S. Department of Defense