

# Temporary Coatings Identified to Protect Surfaces During Ship Construction

**Status:** Technical Success

## PROBLEM / OBJECTIVE

The Navy has a need to develop and implement temporary coatings to protect damage-prone ship components during construction. This Navy Metalworking Center (NMC) project investigated several temporary protective coatings that would prevent or reduce damage and corrosion that occur during the shipbuilding process, significantly reducing the labor needed to remove the corrosion or to repair the damage.

## ACCOMPLISHMENTS / PAYOFF

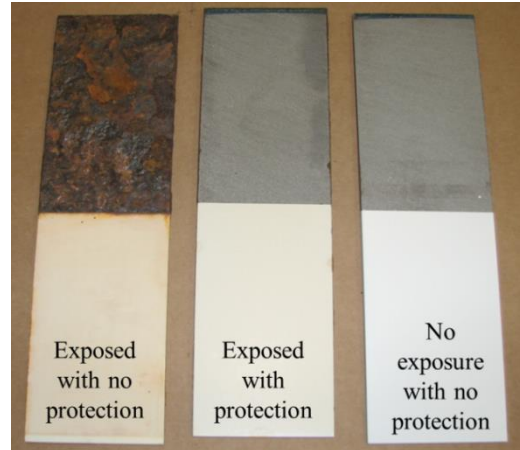
### **Process Improvement:**

The NMC-led Integrated Project Team (IPT) focused on protecting the surfaces in two applications – the weld joint areas on structurally complete units while they are in storage prior to further assembly and non-skid areas throughout the construction process. Among the technical criteria, the IPT selected temporary coatings / materials that could be easily applied and removed, minimizing any residue or surface contamination. Commercially available materials used in other industries were considered for use or adaptation to meet the established technical and cost-reduction goals. The IPT completed preliminary testing and a production evaluation to verify labor reduction estimates. Multiple coatings were found to be appropriate for protection if applied at a proper thickness.

### **Implementation and Technology Transfer:**

Due to significant reductions in the cost benefits for the CVN 79 edge protection application, this project was terminated. No implementation is currently scheduled; however, the solutions developed in this project could potentially benefit other applications.

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Temporary coatings used to protect surfaces during ship construction could save considerable labor and material costs. NMC Photo.

### **Expected Benefits and Warfighter Impact:**

Implementing a temporary coating to protect exposed weld joint areas on ship modules potentially could save significant costs due to reduced labor and material costs.

Implementing a temporary coating to protect non-skid during ship construction potentially could save costs based on reduced labor needed to repair damage and staining.

The results of this effort could apply to DDG 51, LPD, LHA, CVN class ships as well as other vessels.

## TIME LINE / MILESTONE

Start Date:	March 2010
End Date:	March 2012

## FUNDING

Navy ManTech Investment:	\$499K
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## PARTICIPANTS

CVN 79 Program Office (PMS 379)  
 Naval Surface Warfare Center, Carderock Division  
 Newport News Shipbuilding  
 Ingalls Shipbuilding  
 NMC