

SSHT System Improvements Recommended for Navy Ships

Status: Technical Success

PROBLEM / OBJECTIVE

Previous delivery requirements for DDG 1000 necessitated the application of a Surface Ship Hull Treatment (SSHT) system on portions of the underwater hull. While hull treatment has been applied to other vessels, this is a first time it has been a requirement for a surface ship. The DDG 1000 Program Office (PMS 500) has an obligation to reduce the cost of the application of SSHT as much as possible. A Navy Metalworking Center project team evaluated various improvements to the SSHT system in order to reduce the costs for procurement, installation, repair, and decommissioning of hull treatment on DDG 1000 by \$3.5M per hull.

ACCOMPLISHMENTS / PAYOFF

Process Improvement:

The project assessed alternative anti-corrosive paints and adhesives, efficient manufacturing methods of system components, removal of lead from the system, materials/processes to improve installation, and identification/verification of a means to improve the system's durability. In total, 11 materials/processes were evaluated in an effort to reduce the cost of SSHT, with 10 materials/processes being technically successful and recommended for implementation.

Implementation and Technology Transfer:

The SSHT system has yet to be installed on DDG 1000 and therefore the results of this project have not been implemented. If the system is installed, it is expected that all of the project results will be implemented. Lessons learned from this project have been leveraged on other projects with the objective to improve processes or materials for Special Hull Treatment (SHT).

This article was prepared by the Navy Metalworking Center, operated by Concurrent Technologies Corporation, under Contract No. N00014-10-D-0062 to the Office of Naval Research as part of the Navy ManTech Program. Approved for public release; distribution is unlimited.



NMC investigated various improvements in the hull treatment system of DDG 1000 in an effort to save costs from procurement to decommissioning. NMC photo.

Expected Benefits and Warfighter Impact:

This project had the potential to provide the Navy with a total of \$3.5M per hull cost savings in procurement, installation, repair, and decommissioning.

TIME LINE / MILESTONE

Start Date:	November 2006
End Date:	January 2010

FUNDING

Navy ManTech Investment:	\$3.8M
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PARTICIPANTS

Naval Surface Warfare Center, Carderock Division
Navy Joining Center
Ingalls Shipbuilding
Bath Iron Works
Navy Metalworking Center
ONR Navy ManTech