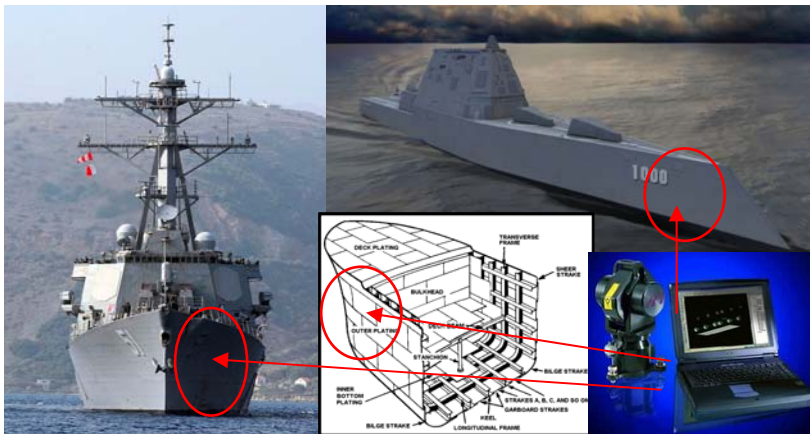


CNST Awards Hull Fairness and Accuracy Control Project

The Center for Naval Shipbuilding Technology (CNST), recently awarded Northrop Grumman Ship Systems (NGSS) a \$975K project to address hull fairness/flatness and accuracy control requirements for DDG-1000.

This production challenge currently has no technology solution that provides NGSS with the capability to meet the restrictive fairness fabrication requirements, as the DDG-1000 requirements are more stringent than those for DDG-51. With the DDG-1000 design concept's stealth demands, NGSS must explore the latest measurement technologies and their associated software applications to develop procedures that will provide more accurate results while decreasing the amount of labor required by the current photogrammetry systems.



This two-phased project will seek to investigate and implement the expanded use of metrology instrumentation during the shipbuilding process at NGSS. The two key areas to be investigated are near-term training on the expanded capabilities of existing systems and new technology, equipment and software to meet more stringent requirements in a more efficient process for future naval

ships. Phase I is a 12-month effort with three tasks: Requirements and Capability Survey (1 month), Process/Capability Improvement (2 months), and an expanded Inter-Sector and Market Technology Research (9 months). NGSS will assess the outcomes of these three related tasks and if determined feasible, NGSS will move to the Field Testing Task, Phase II. Phase II is a 12-month effort to conduct field testing and validation of selected equipment. This phase includes limited training, field testing and utilization of the equipment/software selected in Phase I.

Utilization of new technology with the improved processes will lead to avoiding rework (and its associated cost) and improved cycle time. These improvements will facilitate the shipyard's ability to meet Navy's radar cross section requirements, improve all facets of accuracy control, and improve combat system alignment procedures while driving down cost. NGSS views this project as the key element that will allow for the successful introduction and proving of new technology/equipment/processes in a shipyard environment. The comparing of old and new methods to be conducted will allow for tradesman/craft personnel buy-in and confidence in a new technology that reduces the overall construction demands.

About CNST

CNST is a Navy ManTech Center of Excellence, chartered by the Office of Naval Research (ONR) to identify, develop and deploy, in U.S. shipyards, advanced manufacturing technologies that will reduce the cost and time to build and repair Navy ships. For additional information on this and other CNST projects, please visit www.cnst.us.