



National Shipbuilding Research Program

For Immediate Release

Executive Control Board awards \$14.7M for R&D Project Portfolio

December 16, 2016 -- The Executive Control Board of the [National Shipbuilding Research Program](#) (NSRP) has selected a new round of R&D projects for award, as part of the Program's continuing mission to reduce costs associated with U. S. shipbuilding and ship repair. These new projects, valued at over \$14.7M, including cost share, were among those proposed in response to Research Announcement 15-01, issued in June 2016. Abridged descriptions follow:

HIDEP PROCESS FOR FABRICATION OF LOW-WEIGHT T-STIFFENERS WITH NEAR ZERO WELD DISTORTION FOR SHIPBUILDING

Bollinger Shipyards, EnergynTech, Miller Electric, Vigor Shipyards, Hepinstall Consulting Group, Hobart Brothers Company, Gatekey Engineering

Industry Investment: \$1.51M | **NSRP Investment:** \$1.63M

Duration: 12 Months

Objective

The primary goal of this project is demonstrate the capability of HiDep to produce low distortion T-Stiffeners, and will be fully implemented at Bollinger Shipyard for other yards to witness in production, and gain insight into the supporting processes, weld procedures, instructional materials, and implementation plan to considerably reduce the risk of using a new welding process.

CAR-W PRODUCTION SCANNING & MULTI-ROBOT CAPABILITY ENHANCEMENTS

Bollinger Shipyards, Wolf Robotics, ShipConstructor Software, NSWCCD

Industry Investment: \$2.79M | **NSRP Investment:** \$2.78M

Duration: 24 Months

Objective

The primary goals of this project are to test and integrate part scanning 3D measurement technologies into the robotic welding system design, virtually incorporate multiple robots onto robotic gantry solutions, and provide opt-in proactive transfer of knowledge for up to three ShipConstructor shipyards.

DIGITAL DEADWEIGHT SURVEY

Praeses, Newport News Shipbuilding, Marinette Marine, Conrad Industries, BAS Engineering, DRS Technologies

Industry Investment: \$697K | **NSRP Investment:** \$695K

Duration: 24 Months

Objective

The primary goal of this project is implementation of a DDWS application tool to modernize and automate deadweight survey processes in complex programs, surface combatants and carriers, allowing shipyard and planning yard weight survey teams to significantly reduce the time to conduct surveys and ensuring that those surveys more accurately reflect the as-built condition of the ship.

WELDING APPLICATION DEVELOPMENT FOR HIGH MOBILITY MANUFACTURING ROBOT

Robotic Technologies of Tennessee, VT Halter Marine, Bollinger Shipyards, NASSCO, Visible Welding, Edison Welding Institute, Bath Iron Works

Industry Investment: \$913K | **NSRP Investment:** \$845K

Duration: 24 Months

Objective

The primary goal of this project is advanced mechanized weld capability for joining structural components in ship frames by using a man-portable, small robotic welding arm on a mobile robot platform. This is an extension of the High Mobility Manufacturing Robot (HMMR) prototype, with a focus on collars, clips and erection joint application (CCE-A Robot).

IMPROVING WORKFORCE DEVELOPMENT INITIATIVES USING AUGMENTED REALITY TECHNOLOGY

Newport News Shipbuilding, Norfolk Naval Shipyard

Industry Investment: \$463K | **NSRP Investment:** \$463K

Duration: 24 Months

Objective

The primary goal of this project is to demonstrate the effective use of an augmented reality (AR) application for conducting formal instructor-led training, with the potential to extend the technology to informal continuous training on the deckplate level.



SHIP STRUCTURAL DESIGN OPTIMIZATION FOR IMPROVED PRODUCIBILITY AND ENHANCED LIFE-CYCLE PERFORMANCE

Marinette Marine, DRS Technologies/Advanced Marine Technology Center, NSWCC, Ship Design USA, SPAR Associates, P. Jaquith & Associates

Industry Investment: \$880K | **NSRP Investment:** \$1.1M

Duration: 24 Months

Objective

The primary goal of this project is to develop a ship structural design and optimization modeling and simulation capability that shipbuilders will utilize to enable ship structures to be holistically designed to meet structural performance and safety criteria, facilitate optimization for producibility, and simultaneously enhance structural life-cycle, in-service performance, and generate total ownership cost reductions.

Questions? Contact the NSRP Team at: nsrp@ati.org
or go to the NSRP website: www.nsrp.org

