

Press Release

For Immediate Release

National Shipbuilding Research Program Awards \$17 million for R&D Project Portfolio

September 25, 2019-- 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 \$16.7M in government funding and industry cost share, were among those proposed in response to a Research Announcement issued on March 25, 2019. Abbreviated descriptions follow; prime contractors are noted in **bold text**:

LiftShip 2

Fincantieri Marinette Marine | HII-Ingalls Shipbuilding | VT Halter Marine | Austal USA | Bollinger Shipyards Lockport | Genoa Design International, LTD. | Ship Architects, Inc. | Altair Engineering | ATA Engineering | ShipConstructor USA

NSRP Investment: \$1.03M | **Industry Investment:** \$1.67M

Duration: 24 Months

Objective:

As a follow-on to the completion of the 2018 LiftShip project, this project proposes to extend the functionality further in direct response to feedback from the shipyard participants to address Lifting and Turning of the assemblies, better visual reporting, and ability to manage level-of-detail required in the Finite Element Analysis (FEA) model.

Welding SMART Camera "In the Torch"

Pacific Shipyards International | Vigor Marine | Hepinstall Consulting Group | Gatekey Engineering | EnergynTech | D'Angelo Technologies | Miller Electric Company | Hobart Brothers Company

NSRP Investment: \$1.26M | **Industry Investment:** \$1.26M

Duration: 18 Months

Objective:

The goal of this project is to deliver a portable SMART Camera-Enabled Welding Torch System to enable the welder to view the weld and welding parameters through the helmet without looking directly at the weld. This new welding capability is designed for shipboard and shipyard applications. It will eliminate the need for mirror welding in inaccessible locations, significantly reduce eye injuries, provide voltage and current information at point of use on the video screen during welding, and provide a digital recording of weld quality and process information to enable forensic analysis. The project goal is to provide a SMART technology-enabled welding toolset to attract the "next generation" of welding workforce.



Advanced Development and Implementation of the High Mobility Manufacturing Robot (HMMR)

Robotic Technologies of Tennessee | Edison Welding Institute | Vigor Shipyards | Cahill Consulting

NSRP Investment: \$660K | **Industry Investment:** \$660K

Duration: 24 Months

Objective:

The goal of this project is to address a set of challenges that remain to enable broader implementation of mechanized welds with HMMR in U.S. shipbuilding. The project team will focus on core research, development and implementation strategies to reduce manual welding that takes place in tight spaces and among obstructions or in compartments – most of which require out of position welds.

R&D Insulated Bus Pipe (IBP) Standard Interface to Naval Electrical Equipment

Hepburn and Sons | Tefelen | GD-Bath Iron Works

NSRP Investment: \$1.14M | **Industry Investment:** \$1.14M

Duration: 24 Months

Objective:

The scope of this project is to conduct research and test a common connector that will work with the majority of electrical equipment installed onboard Navy ships. The Final Report will include a summary identifying the findings and common connector best for use with IBP while also assessing environmental factors such as shock, vibration, and electromagnetic compatibility.

Fire Resistant Watertight Structural Doors

HII-Ingalls Shipbuilding | Specified Technologies, Inc. | Southwest Research Institute |

NSRP Investment: \$514K | **Industry Investment:** \$518K

Duration: 24 Months

Objective:

The goal of this project is to design, test, and develop revised drawings for a fire resistant variant of two sizes of the new standardized family of watertight single doors. That new door design was developed during the prior NSRP Standardization of Watertight Closures project. A fire resistant watertight door design will enable cost avoidance on future Navy ship programs.

Onboard Ship Integration of Laser Peening System for Lasting Aluminum Repairs

Hepburn and Sons | LSP Technologies | Vigor Shipyards | NSWC Carderock

NSRP Investment: \$1.78M | **Industry Investment:** \$1.96M

Duration: 24 Months

Objective:

The primary scope is to install a laser peening system onboard the Littoral Combat Ship for pre-weld and post-weld laser peening operations. Phase I will focus on research and design of the Beam Deck Delivery System and integration of the articulating arm. During Phase II, the team will integrate the Procudo® Laser Peening System onto LCS at Vigor Shipyards.



Minimum Standardized Content to Enable a Navy Digital Enterprise

HII-Newport News Shipbuilding | Action Engineering | GD-Bath Iron Works, LMI |

HII-Technical Solutions Division

NSRP Investment: \$870K | **Industry Investment:** \$870K

Duration: 18 Months

Objective:

Enable Navy advanced data collaboration through the configuration management of content and format that conforms to defined standards and specifications. This project will work to establish a shipbuilding industry and Navy wide generic process for data collaboration through alignment with Navy “Model Based Product Support” requirements. It will also address original equipment manufacturers and vendor data exchange format and standards.

Advanced Knowledge Provisioning Using Artificial Intelligence (AI) & Augmented Reality (AR) for Ship Repair

Pacific Shipyards International | Vigor Marine | Hepinstall Consulting Group | Auros Knowledge Systems LLC | D’Angelo Technologies LLC

NSRP Investment: \$800K | **Industry Investment:** \$802K

Duration: 21 Months

Objective:

The goal of this project is to deliver AI-assisted capture and packaging of critical knowledge, such as customer requirements, standards, and shipyard crowd-sourced knowledge to allow AR-assisted automated provisioning directly into ship repair workflows. This capability will automate the mapping of customer specifications and regulatory requirements into work control artifacts such as estimating packages, test and inspection plans, planning work instructions, and standard production work while providing visibility of compliance.

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

