NSRP

Press Release

For Immediate Release

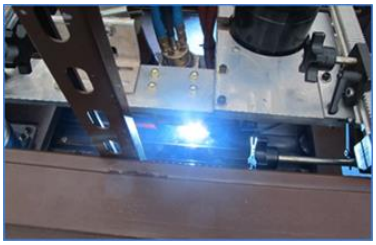
Executive Control Board awards $14.5M for R&D Project Portfolio

December 17, 2015 -- 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 $14.5M, including cost share, were among those proposed in response to Research Announcement 14-01, issued in June 2015. Abridged descriptions follow:

Development of HiDep Welding Process for Butt and T-fillet Joints

Bollinger Shipyards | EnergYntech; Electric Boat; Ingalls Shipbuilding; Gunderson Shipbuilding; Gatekey Engineering; Miller Electric and Hobart Companies; Vigor Shipyards

Industry Investment: $1.42M | **NSRP Investment:** $1.41M
Duration: 12 Months



Objective
This project is a follow-on to the HiDep Weld Tfillet and Butt Weld Development RA project. It aims to implement the results of the new welding process to reduce weld distortion and improve productivity in shipyard panel construction. The new process utilizes induction heating technology and has minimal capital cost requirements.

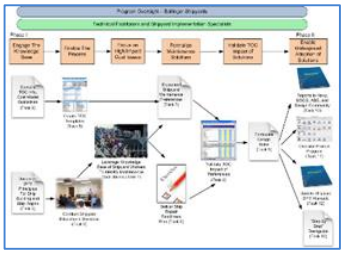
Mitigation of Stress Corrosion Cracking, Cavitation Erosion and Forming Complex Shapes Using Laser Peening

Hepburn & Sons, LLC | Curtiss-Wright Surface Technologies; Austal USA; ABS; NSWC-Carderock
Industry Investment: $502K | **NSRP Investment:** $1.46M
Duration: 24 Months

Objective
This project aims to apply existing laser peening technology to shipyard construction and repair issues that include: mitigation of stress corrosion cracking of sensitized aluminum, mitigation of cavitation erosion of aluminum components, and formation of complex metal (non-ferrous) geometries.

Reduction of Total Ownership Costs (R-TOC) through Application of Design for Maintenance (DFM) Software

Bollinger Shipyards | Hepinstall Consulting Group; Tedesco Consulting; Gatekey Engineering
Industry Investment: $399K | **NSRP Investment:** $399K
Duration: 12 Months

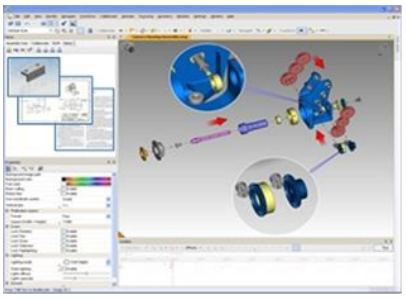


Objective

This project is a follow-on to the NSRP Design for Maintainability Training project and intends to: update an extensive repository of over 1000 rules and standards to include lessons learned from the Virginia Class Submarine; leverage repeatable rules and standards on new designs, current designs, and planning products; track and measure the integration of Maintenance Standards in design and modernization planning; prioritize and perform 40 of the 460 comprehensive BCA studies captured under the previous DFM project; and develop and deliver a condensed 1-day version of the DFM training to U.S. Shipyards, government representatives, design agents, and maritime colleges.

3 Views to 3D

Newport News Shipbuilding
Industry Investment: $402K | **NSRP Investment:** $402K
Duration: 18 Months



Objective

This project proposes to develop processes (and supporting tools) to convert 2D drawings to 3D product models from which electronic work instruction documentation can be produced. The resultant technology and processes will be applicable to both the repair and modernization lifecycle phases.

Standardization of Watertight Closures

HII- Ingalls Shipbuilding | Bollinger Shipyards
Industry Investment: $776K | **NSRP Investment:** $776K
Duration: 24 Months

Objective

This proposal will deliver a rationalized/standardized list of watertight closures that is a reduced subset of those in use today. It will confirm the requirements for watertight closures with Navy technical personnel, and identify the design documentation for previously approved closures that deviate from the current Navy standard. Using this data, the team will down-select to a subset of closures and develop new design documentation for a family of approved and qualified door designs enhanced with accurate logistics data that support ship maintenance and repair.

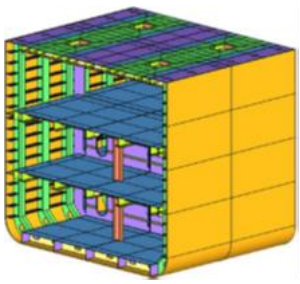
Optimized and Standardized Shipyard Foundations for Cross-Contract Applications

HII- Ingalls Shipbuilding| Bollinger Shipyards
Industry Investment: $734K | **NSRP Investment:** $734K
Duration: 24 Months

Objective
This project will capture the design information of all the foundations currently used on the LHA, LPD, and DDG programs at Ingalls; and the FRC program at Bollinger. The team will identify the fabrication cost drivers for each different foundation design feature and develop a "best practices guide" for foundation design based on the identified cost drivers. Currently used foundation designs that most closely adhere to the "best practices guide" will be organized into families of foundations that are optimized for producibility and loaded into a database for easy access by the designers.

LiftShip

Austal USA| Bollinger Shipyards; VT Halter Marine; Vigor Shipyards; Conrad Shipyard; SSI USA; Altair Engineering; Genoa Design International
Industry Investment: $2.57M | **NSRP Investment:** $2.57M
Duration: 24 Months



Objective
The LiftShip project proposes to automate the process of Finite Element Analysis model generation and analysis in support of large ship structure lifting and handling, and to present the results in a clear, concise go/no-go metric for the configuration. The project also proposes to track lifting components and to generate lift drawing output and information to support production. The ultimate goal is to facilitate quicker and easier detailed analysis of lifting and handling to minimize generation of built-in stress and therefore distortion.