

NSRP

National Shipbuilding Research Program

News & Information

May-June 2016

Research Announcement 15-01 Released

On June 30, 2016, the National Shipbuilding Research Program issued [Research Announcement 15-01](#) to solicit proposals for research, development and implementation of best practices in the U.S. Shipbuilding and repair enterprise. Some subject areas that are of interest to the Navy and NSRP ASE are:

- Improve quality in ship construction and/or repair
- Reduce Total Ownership Cost of ships
- Improve energy efficiency or environmental impact in shipyards or ships
- Reduced cost associated with systems integration during ship construction, modernization and maintenance

Important Dates

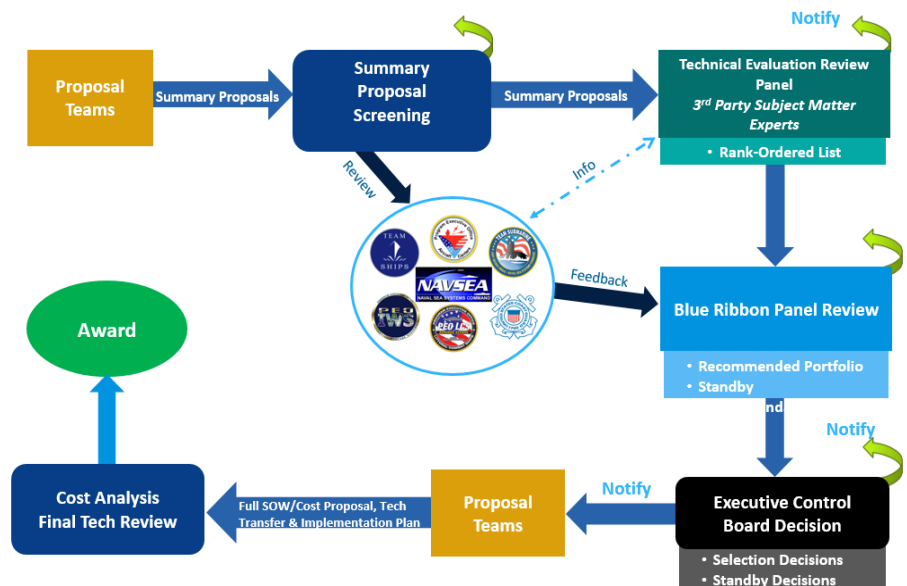
- **September 13, 2016 (12:00 Noon EDT) – Summary Proposal receipt deadline**
- **November 2016 (estimate) – Oral Reviews**
- **December 2016 (estimate) – Project Selection**

The [Proposal Preparation Kit \(PPK\)](#), which contains formatting guidelines, contracting requirements, proposal selection process and detailed submission instructions, has been updated to correspond with the solicitation. The PPK contains details on the newly revised Strategic Investment Plan.

This RA has also been posted to the Federal Business Opportunities website ([FedBizOpps](#)).

A Proposers Conference was held on June 22, 2016 to provide a briefing on the NSRP proposal submission and selection process. The [Q&As](#) are available on the NSRP website.

Research Announcement process



More Program News

RECENT PROJECT NEWS

Laser Peening of Ship Structures to Reduce Production Costs - project team completed testing on the effects of laser peening on Inconel® 625 clad propulsion shafting material. To date the results have demonstrated that laser peening significantly increases the lifetime of propulsion shaft material beyond that of an untreated or shot peened test sample. Fatigue testing shows that laser peening improves fatigue life by 470% for bare steel shaft material and by 1300% for Inconel clad shaft material. Further, fatigue tests performed with shaft coupons immersed in 3.5% salt water during testing showed that laser peening increased material lifetime 3.5x over baseline results.

Computer Aided Robotic – Welding (CAR-W) - project is closing the automation gap between domestic and foreign shipbuilders by developing innovative and highly cost-effective methods for managing and programming robotic welding systems. The project team will be hosting a demonstration **Tuesday, July 12th** at Wolf Robotics in Fort Collins, CO which will demonstrate easy, accurate programming of a 9-axis robotic gantry and welding of complex ship structures. Tight integration with the ShipConstructor CAD platform allows the system to leverage the wealth of engineering information present in the digital ship model. CAR-W provides fast generation of collision-free weld paths and automatic assignment of robot process data according to weld callouts and part geometry represented in the ship model. Don't miss the initial demonstration of this powerful new technology focused on solving the unique automation challenges faced by modern shipbuilders.

RECENTLY COMPLETED PROJECTS:

- [Flux Cored Welding Electrode for Welding HY100 and HSLA100](#)
- [Universal Primer and Surface Preparation Process](#)
- [Alternatives to Fiber Optic Connectors](#)
- [Development of an Alternative, Low Cost False Deck](#)
- [Flexible Infrastructure Spec Requirement Gaps](#)

Click on the name to view the project page on the NSRP website and to request final reports

RECENT PROJECT NEWS

The Development and Application of Standard Hull, Mechanical, & Electrical (HM&E) Modules to Increase Flexibility in Ship Design - project team held a webinar demonstration of the 3D ShipConstructor models for the following HM&E standard modules:

- Four Person Stateroom (Navy)
- Four Person Stateroom (Small Craft)
- Private Toilet and Shower
- Semi-Private Toilet and Shower

During the demonstration the actual 3D ShipConstructor files were displayed to demonstrate the full functionality of the models and to demonstrate that future designers have the ability to import the models into future ship designs. The library capability of the models was demonstrated as well. The various components are located in libraries such that substitutions for various parts is made easier for future designers. The model was displayed showing the various subcomponents and equipment references.

Alternatives to Fiber Optic Connectors - Project team completed work and submitted its final report. The objective of this project was to increase the number of situations in which fiber optic fusion splices could be utilized in shipbuilding to replace fiber optic connectors. Due to instability and the need for extreme cleanliness, it is recommended that fiber optic connectors be used only in applications where frequent mating and de-mating are required. The project team investigated several splicing technologies as replacement candidates. To test their durability in rugged environments, fusion splices were left un-secured inside enclosures and tested at 120 percent of commercial vibration and shock limits. Fluctuations in optical performance were negligible.

The project team determined that use of fusion splices in lieu of fiber optic connectors provides savings in excess of 70% per connection, and avoids the following costs associated with fiber optic connectors:

- The cost of managing thousands of connector components and spares.
- Craftsmanship required for terminus and connector assembly.
- Concern for end face inspection for quality and geometry.
- Concern for epoxy shelf life and curing.
- Field maintenance for permanent fiber optic connections.

Navy & Industry News

Newport News Industrial Announces 52,000-Square-Foot Expansion at its Headquarters. Huntington Ingalls Industries announced today that its Newport News Industrial subsidiary will undergo a 52,000-square-foot expansion at its headquarters facility in Newport News. (6/27/16) ... [More](#)

BAE Systems Awarded \$75 Million U.S. Army Contract to Develop Next-Generation Geospatial Intelligence Capabilities. BAE Systems will assist in the exploitation and processing of geospatial data and develop various intelligence products for INSCOM's Military Intelligence Brigade – Theatre Integrated GEOINT Divisions. The company's team of specialists will also assist the Army with its next-generation geospatial intelligence developmental and experimental intelligence collection systems and technologies. (6/21/16)[More](#)

Navy Accepts Delivery of Future USS John P. Murtha (LPD 26). The U.S. Navy accepted delivery of the future John P. Murtha (LPD 26) during a ceremony at the Huntington Ingalls Industries shipyard, May 13. (5/16/16).....[More](#)

Welder Training via Intelligent Video Tools - project developed and demonstrated a cost-effective, real-time welder video system to improve the speed and effectiveness of welder training and qualification, increase first-time success in qualification testing, and reduce overall training costs. The system combines a highly advanced camera which can video a weld in real-time, and computer system for weld parameter and video monitoring and playback. The training system is highly portable and was developed over a period of testing at Bollinger Shipyards, Ingalls Shipbuilding, and Manchester Community College. The completed system is available for purchase and has already been picked up by several community colleges and technical schools. Videos showing operation of the system and training recommendations can be found on the NSRP website.

Panel Project Solicitation

7 panels are still accepting White Papers in response to the 2016 Panel Project solicitation issued on April 4, 2016. The deadline for Panel Chairs and Ad Hoc Groups to submit to SCRA those white papers which have been reviewed and selected for submission by their respective panels is August 3, 2016.

For more information regarding white paper submission and project selection process please visit NSRP.org.

Upcoming Meetings

Computer Aided Robotic Welding (CAR-W) Demo
July 12
Fort Collins, CO
[More Info](#)

Ship Warfare Systems Integration
July 20
Washington, DC
Huntington Ingalls Industries
[More Info](#)

NSRP Day @ NAVSEA
September 23
Washington Navy Yard
[More Info](#)

Joint Panel Meeting
Business Technologies, PPP&F, SDMT,
Commonality Working Group
October 19-20
Lake Mary, FL
[More info](#)

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NSRP Extended Teams

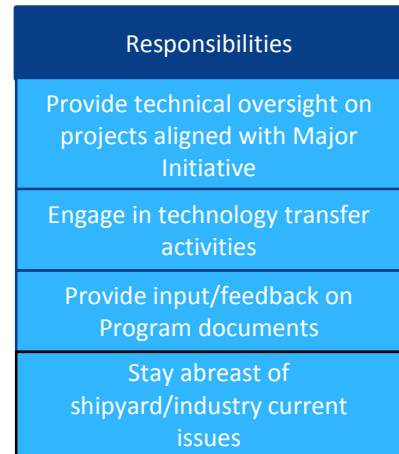
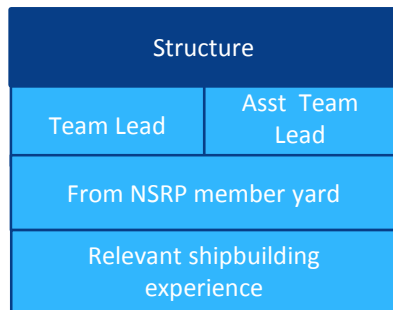
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Major Initiative Team Leads

The NSRP Extended Team is comprised of individuals who are either from a U.S. shipyard or a related industry and have both relevant technical experience and interest in a Major Initiative and/or panel.

Ship Design & Material Technologies Lead: David Rice (NNS) Asst Lead: Dan Sfiligoi (NASSCO)	Ship Production Technologies Lead: Gary Zimak (NNS) Asst Lead: Kirk Daniels (EB)	Business Processes & Information Technologies Lead: Mark Debbink (NNS) Asst Lead: Jeff Schaedig (NASSCO)	Infrastructure & Support Lead: David Glynn (Ingalls) Asst Lead: Ryan Lee (Austal)	MITL-at-large Lee Duneclift (NASSCO) Steve Cogswell (BAE) John Walks (Ingalls) Paul Friedman (BIW)
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Current Major Initiative Team Leads



NSRP Shipyard Delegates

NSRP Shipyard Delegates (NSD) serve as a primary point of contact for NSRP-related information flowing into and out of their shipyards. For those ECB shipyards who are not represented on the MITL slate, a qualified individual is appointed by the ECB representative from that shipyard to serve as NSD.

Newport News	NASSCO	Bollinger	Austal	Bath Iron Works
David Rice	Jeff Schaedig	Dennis Fanguy	Shawn Wilber	Sarah Bramson
Electric Boat	Ingalls	Marinette Marine	BAE Systems SE	Vigor
Maria Reis	John Walks	Greg Abbs	Steve Cogswell	Judie Blakey
		VT Halter		
		David Delancey		

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NSRP Extended Teams

May-June 2016

Panel Chairs

The eleven panels are aligned with the four NSRP Major Initiatives and focus areas of the Strategic Investment Plan, and are the working groups of NSRP.

Ship Design & Material Technologies	
Chair: Alicia D'Aurora (NNS)	Vice Chair: John Malone (Consultant)

Electrical Technologies	
Chair: Jason Farmer (Ingalls)	Vice Chair: Walter Skalniak (Panduit Corp)

Business Processes	
Chair: Virgel Smith (Ingalls)	Vice Chair: Patrick Roberts (ShipConstructor)

Environmental	
Chair: Pat Killeen (Signal)	Vice Chair: Brian McVey (Ingalls)

Ship Warfare Systems Integration	
Chair: Perry Haymon (Ingalls)	Vice Chair: Vince Stammetti (DRS)

Planning, Production Processes & Facilities	
Chair: Ken Fast (EB)	Vice Chair: Tonya Boney (Ingalls)

Information Technologies	
Chair: Denny Moore (EB)	Vice Chair: Jamie Breakfield (Ingalls)

Risk Management	
Chair: Thresa Nelson (NNS)	Vice Chair: Yaniv Zagagi (Golder)

Surface Preparation & Coatings	
Chair: Arcino Quiero (NNS)	Vice Chair: Robert Cloutier (BIW)

Note: BP/IT Panel merger in-progress

Workers Comp Committee Chair: Lauren Seals (EB)	Safety & Health Committee Chair: Frederick Davis (EB)
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Welding Technology	
Chair: Lee Kvidahl (Ingalls)	Vice Chair: Mike Sullivan (NASSCO)

Workforce Development	
Chair: Anna Bourdais (Ingalls)	Vice Chair: Ann Franz (NWTC)

Structure
Chair
<ul style="list-style-type: none"> From U.S. Shipyard Relevant industry experience
Vice-Chair
<ul style="list-style-type: none"> Relevant technical and industry experience Preferably from a U.S. Shipyard
Members
Industry and Navy stakeholders

Responsibilities
Oversee panel meetings
Provide technical oversight on panel projects
Assist in the execution of panel project solicitations
Participate in other technology transfer activities
Provide input/feedback on Program documents
Stay abreast of shipyard/industry current issues



Executive Control Board

Executive Director and Staff

For more information, contact the NSRP staff at: nsrp@ati.org

Extended Team

Major Initiatives

Ship Design & Material Technologies	Ship Production Technologies	Business Processes & Information Technologies	Infrastructure & Support
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Panels

Ship Design & Material Technologies	Electrical Technologies	Business Processes	Environmental
Ship Warfare Systems Integration	Planning, Production Processes & Facilities	Information Technologies	Risk Management
	Surface Preparation & Coatings	Note: BP/IT Panel merger in-progress	Workforce Development
	Welding Technology		

NSRP MISSION

Manage and focus national shipbuilding and ship repair research and development funding on technologies and processes that will reduce the total ownership cost of ships for the U.S. Navy, other national security customers and the commercial sector and develop and leverage best commercial and naval practices to improve the efficiency of the U.S. shipbuilding and ship repair industry.
 Provide a collaborative framework to improve shipbuilding-related technical and business processes.

