NSRP

National Shipbuilding Research Program

News & Information December 2016-March 2017

NSRP All Panel Meeting 2017

The NSRP All Panel Meeting was held March 7-9, 2017 at the Francis Marion Hotel in Charleston, SC. The event was attended by over 340 attendees and featured an Augmented Reality and Virtual Reality (AR/VR) forum. It kicked off with keynote addresses by Executive Control Board Vice Chair, Richard McCreary (BAE Systems-Southeast Shipyards), Vice President of Central Planning & Process Excellence Rick Spaulding (Ingalls), and RDML Lorin Selby, Chief Engineer (NAVSEA 05). The NSRP Panel Chairs also presented "State of the Panel" briefs.

Presentations included:

- Laser Peening
- Induction Straightening for CVN
- Distributed Temperature Sensing for Inspection of Electrical Panel on Navy Ships
- Variant Reduction for Shipboard Installed Connectors
- Utilization of Technical Data for Cost Estimation and Change Management
- Lifecycle Integrated Data Environment
- Optimization & Analysis of Temporary Ventilation for Confined Spaces
- Weld Sequence Planning for Major Assemblies
- Development of HiDep Welding Process for Butt and T-Fillet Joints

Twenty-two NSRP, ManTech and general interest technologies and projects participated in the walk-through Project Expo.

Day Two highlights included presentations on:

- Improved Methods for Bonding and Grounding
- Digital Shipbuilding
- Additive Manufacturing for Corrosion and Shipbuilding
- Standardization of Watertight Closures
- Power Panel and Breaker Commonality
- Cost Efficient Welder Performance Qualification Testing
- High Deposition Rate Submerged Arc Welding
- First Time Quality of the Dockside Tests and Trials Process

NSRP

Program & Project News

December 2016- March 2017

Executive Control Board selects new round of R&D Projects

On December 13, 2016 the Executive Control Board of the National Shipbuilding Research Program (NSRP) 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 $13.95M, including cost share, were among those proposed in response to Research Announcement 15-01, issued in June 2016. Projects selected for award can be found on the press release.

New Digital Shipbuilding Course Offered at Old Dominion University

Dr. Jennifer Michaeli of Old Dominion University is facilitating a course on Digital Manufacturing as it applies to the shipbuilding industry. This class will be part of the curriculum to receive an undergraduate minor in Marine Engineering. This was a late addition to the course catalog, but it is being offered for the spring semester 2017 at the ODU Tri-Cities Center in Suffolk.

This course supports many of the NSRP Strategic Investment Plan (SIP) areas of interest and Business Process Panel objectives such as Digital Shipbuilding, Model Based Enterprise, Augmented Reality, Laser Scanning, Mobile Computing and many more. Portions of the course are based on NSRP RA project results.

Newport News Shipbuilding is very excited to help train the next generation of shipbuilders, who will be learning firsthand the products and practices we are using to transform the shipbuilding industry as a part of their academic studies. There are great opportunities to leverage this class to create a pipeline of future designers, engineers, and planners, creating the workforce of the future. This is one of the first true industry-academic partnerships, outside of a war effort, where a shipyard has reached into an academic setting to teach a potential future workforce on shipbuilding as a profession. More information can be found on the Course Description Flyer.

Conrad Shipyard joins the NSRP Collaboration

In March 2017, Conrad Shipyards joined the NSRP collaboration and was in attendance to represent their yard at the All Panel Meeting and Executive Control Board meeting March 7th-9th. Mr. René Leonard, Vice President of Business Development, is serving as the Executive Control Board representative and Mr. Joe Browning as the Shipyard Delegate (NSD). We welcome them to the collaboration and look forward to their participation and contributions.

NSRP
Program & Project News
December 2016- March 2017

Dynamic Change Awareness

The Dynamic Change Awareness Research Announcement project objective was to address a fundamental issue for most Navy ship programs. Legacy methods of moving engineering, material, and production data from the people who produce or assemble the data to those who need and use the data form the basis for many current shipyard data transmittal processes. In most cases, digital data from the 3D CAD model flows to a certain point in the process and is then converted to paper (or to a static image file that can no longer be edited and is thus equivalent to paper). Although the stage of the process where transition to paper occurs can vary between processes and between shipyards, eventually the CAD data hits a "dead end" and the paper data transfer methods begin, with all the attendant issues common to such processes. These legacy processes do not support timely movement of change data to or from the waterfront, leading to increased delay, disruption and rework. The project team addressed the most common change issues most shipyards have:

- Excessive time from initiation and approval of the change to delivery of the change data to those who will execute the change,
- Methods and processes for delivery and documentation of proposed field changes back to Engineering and Change Management that are inconsistent and unreliable, and
- Methods and processes for delivery and documentation of actual production progress that are inconsistent, causing errors and rework due to incorrect assessment of the point of incorporation of the resultant change.

The project team successfully developed the requirements and mapped the current change management processes for Ingalls Shipbuilding, Bollinger Shipyards, and Austal, USA. Additionally, the team identified best practices for change data flow as well as opportunities for improvement.

RECENTLY COMPLETED PROJECTS:

- Grounding for Adhesive Outfitting

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

NSRP

NSRP Extended Teams

December 2016- March 2017

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	Ship Production Technologies	Business Processes & Information Technologies	Infrastructure & Support	MITL-at-large
Lead: David Rice *(NNS)* **Asst Lead:** Dan Sfiligoi *(NASSCO)*	**Lead:** Gary Zimak *(NNS)* **Asst Lead:** Kirk Daniels *(EB)*	**Lead:** Mark Debbink *(NNS)* **Asst Lead:** Jeff Schaedig *(NASSCO)*	**Lead:** Denny Moore (EB) **Asst Lead:** Ryan Lee (Austal)	Barry Fallon *(NNS)* Steve Cogswell*(BAE)* John Walks *(Ingalls)* Paul Friedman *(BIW)* Mimi Vymola *(EB)*

Current Major Initiative Team Leads

Structure	
Team Lead	Asst Team Lead
From NSRP member yard	
Relevant shipbuilding experience	

Responsibilities
Provide technical oversight on projects aligned with Major Initiative
Engage in technology transfer activities
Provide input/feedback on Program documents
Stay abreast of shipyard/industry current issues

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.

Conrad Shipyard
Joe Browning

Newport News	NASSCO	Bollinger	Austal	Bath Iron Works
Alicia D'Aurora	Jeff Schaedig	Dennis Fanguy	Shawn Wilber	Sarah Bramson
Electric Boat	**Ingalls**	**Marinette Marine**	**BAE Systems SE**	**VT Halter**
Mimi Vymola	John Walks	Greg Abbs	Steve Cogswell	David Delancey

NSRP

NSRP Extended Teams

December 2016- March 2017

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)*

Ship Warfare Systems Integration

Chair: Perry Haymon *(Ingalls)*	**Vice Chair:** Vince Stammetti *(DRS)*

Electrical Technologies

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

Planning, Production Processes & Facilities

Chair: Ken Fast *(EB)*	**Vice Chair:** Tonya Boney *(Ingalls)*

Surface Preparation & Coatings

Chair: Arcino Quiero *(NNS)*	**Vice Chair:** Robert Cloutier *(BIW)*

Welding Technology

Chair: Lee Kvidahl *(Ingalls)*	**Vice Chair:** Mike Sullivan *(NASSCO)*

Business Technologies

Chair: Virgel Smith *(Ingalls)*	**Vice Chair:** Patrick Roberts *(ShipConstructor)*

Digital Shipbuilding Committee
Chair:
Jamie Breakfield (Ingalls)

Environmental

Chair: Kyle Hopf (Tech Sol.)	**Vice Chair:** Brian McVey *(Ingalls)*

Risk Management

Chair: Thresa Nelson *(NNS)*	**Vice Chair:** Yaniv Zagagi (Golder)
Workers Comp Committee Chair: Lauren Seals (EB)	**Safety & Health Committee Chair:** Frederick Davis (EB)

Workforce Development

Chair: Anna Bourdais *(Ingalls)*	**Vice Chair:** Ann Franz *(NWTC)*

Structure
Chair
• From U.S. Shipyard • Relevant industry experience
Vice-Chair
• 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

NSRP
Contact Us

December 2016- March 2017

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**

Panels

- **Ship Design & Material Technologies**
- **Ship Warfare Systems Integration**
- **Electrical Technologies**
- **Planning, Production Processes & Facilities**
- **Surface Preparation & Coatings**
- **Welding Technology**
- **Business Technologies**
- **Environmental**
- **Risk Management**
- **Workforce Development**

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.