Winter 2019/2020 Newsletter

Photo courtesy of Navy.mil

Upcoming Events

Strategic Investment Plan/Technology Investment Plan

January 22-23, 2020

ATI Facility
Summerville, SC

ShipTech 2020

March 26-27, 2020

Charleston Marriott
Charleston, SC

SDMT/BT/PPPF Joint Panel Meeting

April 21-23, 2020

Venue TBD
Honolulu, HI

NSRP Day at NAVSEA 2020

The National Shipbuilding Research Program (NSRP) held its 9th annual NSRP Day at NAVSEA (Washington Navy Yard) on November 20th. The event, a collaborative effort between NAVSEA and private industry, focuses on developing technologies and best practices to reduce the cost in the U.S. shipbuilding and repair industry.

As quoted in the *NAVSEA Observer*, Mr. Robert Shevock, Executive Director, Program Executive Office for Aircraft Carriers, "NSRP is a very important program that provides an opportunity for our shipyards to work together with industry partners and the Navy to bring in technology that will make shipbuilding more affordable and efficient."

From 9am until 1pm, project teams from 33 NSRP-awarded Panel Projects and Research Announcement projects (full list below) presented and discussed their recently-finished and ongoing projects to NSRP Day attendees. Attendees included NAVSEA personnel such as Deputy Commander for Ship Design, Integration and Engineering, (SEA 05), Rear Adm. Lorin Selby, USN, NSRP Executive Control Board officers and members, and others who have interest or found interest in the projects. The projects covered a wide range of shipbuilding activities and information was shared amongst an audience of Navy and contractor personnel with a role or interest in shipbuilding and ship repair.

During breakout sessions, five RA project teams presented their progress and results to a classroom full of attendees.

Projects presented at NSRP Day are listed on the next page.

Projects presented at NSRP Day

Panel Projects

Applications of Targetless Photogrammetry for Facilities and Close Range Metrology
Quick-Deploy Scaffold for Improved Safety and Lower Cost
Shipboard Pipe Insulation Tape
Shore Power Connector Testing
Shipboard Fiber Optic Cables Design Enhancements
Shipboard Cable Trays
ExpressMarine Integration
Support Delivery of Shipbuilder Product and Technical Data to an In-Service Navy PLM for all Classes of Ships
Knowledge Provisioning to Improve and Simplify ABS Digital Compliance
Joint Operable Standards for Containerized Modules
COMPASS- COMbined Product ASSessment Tool
Design of a SIFD Principal Unit and Development of an EQT Strategy
TRITON Dynamic Network Paradigm: Analysis and Demonstration
Fusion Splice Enclosure at Equipment
Weld Sequence Modeling Software Interface Development
Survey of Surface Preparation and Coatings Automation
Test and Evaluation of Primers with Extended AF Overcoat Window
Standardization and Digitization of Visual Inspection for Shipbuilding and Repair
Certificate Program: Shipyard Industry Surface Prep and Coating Training
Build Your Future (BYF): Shipbuilding & Ship Repair Works!
Miniature Torch Speed Sensor Based Adaptive Manual Arc Welding
Fiber Optic Testing Enhancement for Cost Reduction Follow On
Advanced Impact Analysis – Potential Changes to Weld Fume Carcinogenicity Designation
High Deposition Robotic Arc Additive Manufacturing Process Development
High Penetration Dynamic Buried Arc Welding

RA Projects

Mixed Reality System for Real-Time Construction Problem Resolution
Cost Reduction of Shock Application
Tele Welding - Remote Operation of Shipyard Welding (and other) Equipment
Qualification Testing of Insulated Bus Pipe (IBP) for Shipboard Introduction
Supply Chain Integrity - Blockchain for Smart Contracts
Robotic Arc Directed Energy Deposition Additive Manufacturing for Shipbuilding
Integration of Outfitting and Structural Details on Swaged Bulkheads
Fatigue Analysis of Swaged Bulkheads

Rick Spaulding: An NSRP Legacy

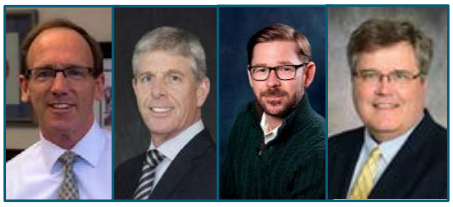
A consistent face of NSRP Leadership, Rick Spaulding has spent the last 15 years (2004-2019) on the Executive Control Board (ECB). He has had a lasting impact on the program as a whole, from leading the ECB as Chair, to mentoring three other ECB Chairs, and beyond as an ECB member for Newport News Shipbuilding, Northrup Grumman Ship Systems-Gulf Coast operations, and Huntington Ingalls Industries' Ingalls Shipbuilding. His hard work and dedication to achieving the goals of NSRP has been recognized and recounted by his peers and he will be missed as a regular face of NSRP.

His commitment to national shipbuilding and ship repair research can be best summed up by Capt. Lehnhardt USN, NAVSEA 06 NSRP Program Executive, saying "Countless engineers and mangers have learned from your examples of thoughtful dialogue and kind interactions while pursuing excellence."

Rick Spaulding receives a token of appreciation at his celebration dinner on November 18th from ECB Chair, Don Hamadyk, on behalf of NSRP.

New ECB Officers

As featured in MarineLink and page 56 in September's *Marine News* magazine, the National Shipbuilding Research Program (NSRP) has announced the election of new officers to its Executive Control Board (ECB).



Left to right: Don Hamadyk, Steve Davison, Tim Glinatsis, Tom Perrine

Don Hamadyk, Director, Research and Development at Huntington Ingalls Industries' Newport News Shipbuilding division in Newport News, VA, has been elected as ECB chairman for a two-year term. Don earned his undergraduate and Master's degrees from Stevens Institute of Technology.

Don succeeds Tim Glinatsis, Vice President, Engineering at General Dynamics Bath Iron Works in Bath, ME. Tim will be part of the ECB Operating Committee, which also includes the ECB Chair and Vice Chair.

Tom Perrine, Vice President of Engineering at Austal USA in Mobile, AL, has been elected to the ECB Vice Chair position.

Steve Davison, Vice President, Operations Support at General Dynamics NASSCO in San Diego, CA, was elected ECB Treasurer.

Spotlight on: Howard Franklin, NAVSEA 06N Program Engineer and NSRP's "Barrier Buster"

Mr. Howard L. Franklin, II, has joined the staff at NAVSEA 06N as the NSRP Program Engineer. In this role, Howard coordinates between NSRP project teams and the NAVSEA organization to address any barriers to project implementation that may exist or arise on the NAVSEA side. He is and will be a very valuable contributor to the success of the Program. Howard Franklin earned his Bachelor of Science degree in electrical engineering from Virginia State University in 2008. His professional experiences range from engineering to science & technology, program management, and business & financial management. Howard has over 10 years of professional experience working in both the U.S. Government and private sector. In his most recent role he served as a Navy Acquisition and Engineering Directorate professional for the Program Executive Office - Aircraft Carriers. Howard has received several "Special Achievement Awards" for his outstanding efforts within the NAVSEA acquisition workforce community from Program Executive Officers. Howard is Defense Acquisition Workforce Improvement Act (DAWIA) certified at the Program Management Level II. He has always been known as a well-rounded, dedicated individual that embraces time spent communicating with other like-minded motivated individuals.

In other news….

NSRP has a LinkedIn Page! Follow us at https://www.linkedin.com/company/nsrp-national-shipbuilding-research-program/. We will be discontinuing our Facebook page (wait, NSRP had a Facebook page??) and will be focusing our efforts through LinkedIn to provide more visibility on updates and events.

Executive Control Board Awarded $17 million in response to the RA 20-01 Projects at September Quarterly Meeting

The following RA 20-01 projects, listed below along with their contractors, were selected for award. Please see the full press release here.

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

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

Advanced Development and Implementation of the High Mobility Manufacturing Robot (HMMR)
Robotic Technologies of Tennessee | Edison Welding Institute | Vigor Shipyards | Cahill Consulting

R&D Insulated Bus Pipe (IBP) Standard Interface to Naval Electrical Equipment
Hepburn and Sons | Tefelen | GD-Bath Iron Works

Fire Resistant Watertight Structural Doors
HII-Ingalls Shipbuilding | Specified Technologies, Inc. | Southwest Research Institute

Onboard Ship Integration of Laser Peening System for Lasting Aluminum Repairs
Hepburn and Sons | LSP Technologies | Vigor Shipyards | NSWC Carderock

Minimum Standardized Content to Enable a Navy Digital Enterprise
HII-Newport News Shipbuilding | Action Engineering | GD-Bath Iron Works, LMI | HII-Technical Solutions Division

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

ECB Selects $2.8 million in Panel Projects at November Quarterly Meeting

The following panel projects, listed by panel, were selected for award. Please see the full press release here.

Business Technologies Panel
Structural Interface for Automated Compliance Checking

Electrical Technologies
Organic LED, Low-Voltage Shipboard Lighting – Testing and Demonstration
Advanced Topside Lighting System

Environmental, Health & Safety
Identifying, Evaluating, and Mitigating Ocular Hazards in Laser Processing

Planning, Production Processes & Facilities
Additive Manufactured Solutions in the Shipyard of Job Aids, Replacement and Part Prototypes

Ship Design & Material Technologies
ASTM F1387 Testing for Mechanically Attached Fittings
Standardization of Watertight Hatches and Scuttles
Scaling Up of 3D Printed Castings

Ship Warfare Systems Integration
Extension Basis for 72-inch POA Enclosure Systems to DDG and CG
Alternate False Deck Design Optimization and Qualification

Surface Preparation & Coatings
Optimize Power Tool Surface Preparation

Welding Technology
Validate a Testing Protocol to Establish the Maximum Heat Input for Welding S-1 Series Carbon Steels with Toughness Requirements
Multi-factor Monitoring of Hybrid Laser-Arc Welding Applications
Deep Penetration Laser-GMAW Welding

Workforce Development
Certificate Program: Shipyard Industry Marine Designer Training
Certificate Program: Shipyard Industry Manufacturing

Joint Panel Projects
EHS-PPPF Navy Tank Study for Robotics Applications
SDMT-BT Simulation Workflow Development for Additive Manufacturing
SWSI-ELEC Electrical Connector Standardization
WFD-WELD Women in Welding

Closed Projects for the Oct.-Dec. 2019 Quarter

The following RA and Panel Projects have closed. Please email NSRP at nsrp@ati.org to request final reports. Distribution information is below.

Closed Research Announcement Projects

2018-442
CAR-W for Multipass and CAD System Extension
Final report distribution is authorized to project participants, NSRP ASE Program representatives, and U.S. shipyards.

2017-425
CAR-W Production Scanning & Multi-Robot Capability Enhancements
Final report distribution is authorized to project participants, NSRP ASE Program representatives, and U.S. shipyards.

Closed Panel Projects

2005-341A-061
Using Fire Retardant Gels During Hotwork
Final report distribution is approved for public release; distribution is unlimited.

2019-473-001
Advanced Impact Analysis – Potential Changes to Weld Fume Carcinogenicity Designation
Final report distribution is approved for public release; distribution is unlimited.

2019-478-001
Short Course on Dredging Fundamentals for Shipyard Operations & Environmental Sustainability
Final report distribution is approved for public release; distribution is unlimited.

About the Cover Photo

From Navy.mil article: Annual Festival of Lights Brings Holiday Cheer to Pearl Harbor
131217-N-ZY812-001 PEARL HARBOR (Dec. 17, 2013)
The guided-missile destroyer USS Michael Murphy (DDG 112) is moored pierside during the annual Pearl Harbor Festival of Lights. The guided missile destroyer was named after Lt. (SEAL) Michael Murphy, a Medal of Honor recipient, who was killed in action in the Hindu Kush mountains of Afghanistan in June, 2005. (U.S. Navy photo by Ensign Joshua Flanagan)