

NSRP Surface Preparation and Coatings (SPC) Panel Update

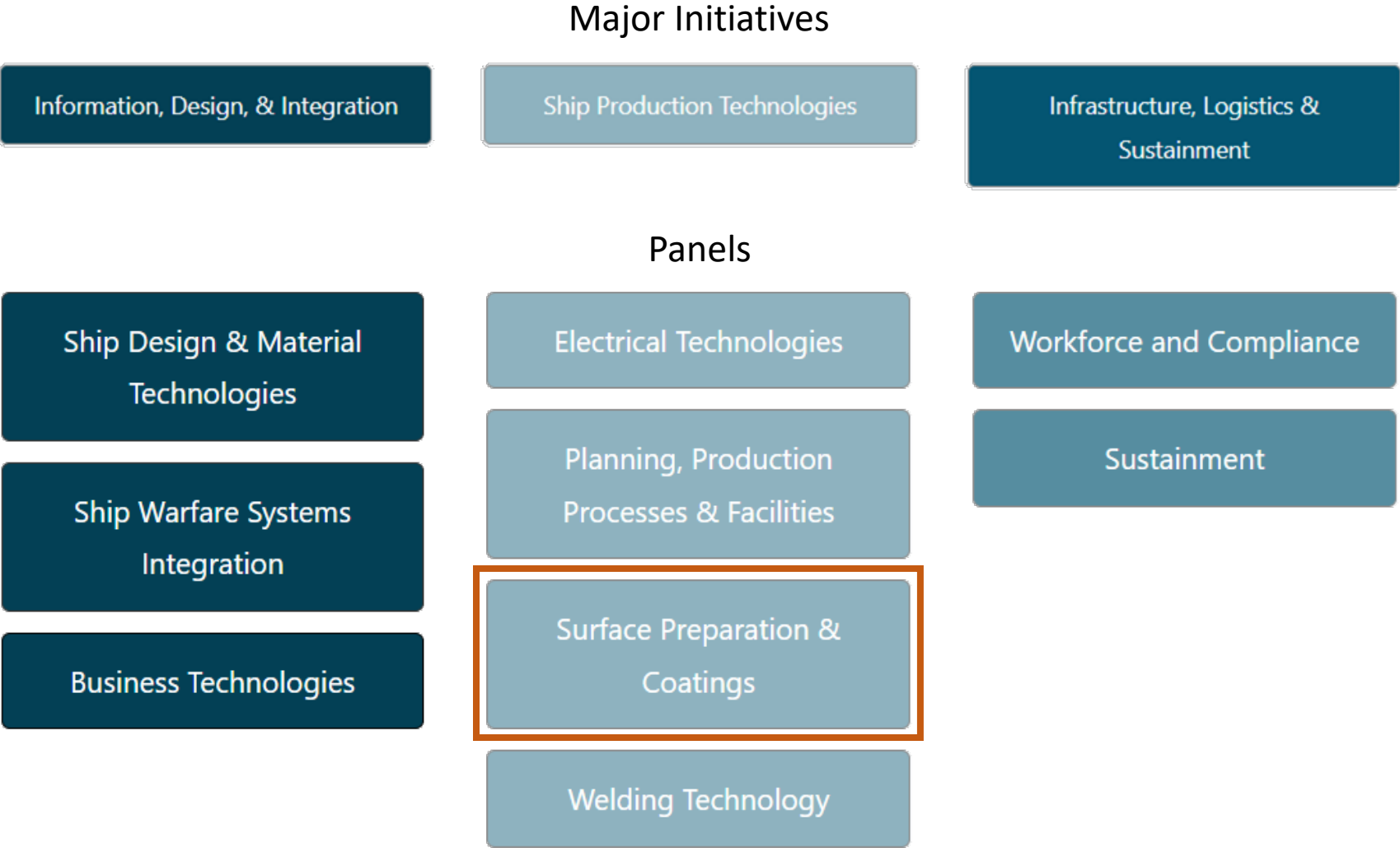
Conlan Hsu, Panel Chair
July 28, 2026 – Brunswick, ME



Mission



NSRP Structure



SPC Purpose

- Develop new technologies and processes that streamline coating and corrosion control operations in shipbuilding new construction and maintenance
- Engage specifiers, suppliers, industry experts, and applicators of coating systems
- Coordinate panel meetings, facilities tours, and demonstrations to address issues and opportunities within the industry
- Leverage best practices from within the community

SPC Panel Steering Committee

Member Shipyards & NAVSEA

- Austal USA – Shawn Wilber
- BAE Systems – Steve Varhall
- Bath Iron Works – David Kinee
- Electric Boat – Chris Wowk
- Ingalls Shipbuilding – Haley McGee
- Marinette Marine – Jacob Phelps
- NASSCO – Angel Zepeda
- Newport News Shipbuilding – Conlan Hsu
- NAVSEA 05 – Mark Ingle & Howard Castle

Panel Officers

- Panel Chair – Conlan Hsu
- Panel Vice-Chair – Angel Zepeda
- TWH – Mark Ingle
- Eng Mgr – Howard Castle

NSRP / ATI

- Ryan Schneider – Project Manager
- Nick Laney – Panel Coordinator

Opportunities

- Research Announcement (RA) Projects
 - Up to 2 year period of performance
 - Up to \$3M budget/year, \$7M total, 50% cost share
 - Proposals due July 24
- Panel Projects
 - 1 year period of performance
 - Up to \$200K budget, no cost share
 - Submitted to a specific panel, top 3 (+1 joint) move forward to ECB
 - Quad charts pitched at MegaRust and July meetings
 - Proposals due August 26
- Panel Meetings
 - Present new technologies & interesting topics to the panel
 - **If interested in presenting, email conlan.hsu@hii-nns.com**

2026 National Defense Authorization Act

www.congress.gov/bill/119th-congress/senate-bill/1071/text

- Sec. 345 Technology Enhancement for Surface Ship Maintenance
 - (2) Real-time sustainment monitoring for sensor-based health tracking
 - (3) Advanced blast and painting for automated hull coating systems
 - (5) Robotic tank inspection for confined space condition assessments
 - (10) Automated nondestructive testing for robotic material evaluation
 - (11) Autonomous underwater vehicles for hull inspection submersibles
 - (13) High-pressure waterjet cleaning for rust and paint removal
 - (15) Smart coatings for self-healing, anti-fouling surfaces
 - (16) Laser ablation for laser-based surface preparation
 - (17) Drone-based inspection for uncrewed structural surveys
 - (18) Electrochemical corrosion mitigation for corrosion prevention systems
 - (21) Plasma coating for durable surface protection
 - (22) High-velocity oxygen fuel coating for high velocity wear protection

SPC Panel Projects

Current Projects

- ❖ 1K Oxsol Free MIL-PRF-24635F Type V Comp 1 Coatings
- ❖ Comparison of Laser Ablation to Surface Prep of Steel 2026
- ❖ Extended Recoat Windows for Non-Critical Zones
- ❖ Pulsed-Laser Comparison Tool 2025

Completed Projects

- ✓ Enhanced Primers for Welding Operations
- ✓ Testing and Analysis of Anti-Biofouling Coatings
- ✓ The Effects of Blast Media on Production and Coating Performance 2024
- ✓ Cleanable Nonskid Deck Covering
- ✓ Ultra Heat Resistant Primer
- ✓ Zinc-Rich Coatings Over High Strength Steel 2023
- ✓ Transition of Power Tool Optimization - RAP
- ✓ Implementation of SP-18 in Construction – RAP 2023
- ✓ Optimize Power Tools Surface Preparation 2020

Completed Projects (continued)

- ✓ Survey of Surface Prep & Coatings Automation
- ✓ Standardization and Digitization of Visual Inspection for Shipbuilding & Repair
- ✓ Primers with Extended AF Overcoat Window
- ✓ Certification Program - Shipbuilding Industry Surface Prep & Coatings Training
- ✓ Virtual Spray Paint Training System 2019
- ✓ Thermal Insulating Aerogel Filled Coatings
- ✓ Evaluation of Plasma Coating Removal & Surface Preparation 2018
- ✓ Partial Blast of UHS Coated Tanks II
- ✓ Retention of Type VI Epoxy under Ultra High Solids 2017
- ✓ Boomlift Carried Environmental Enclosure
- ✓ Implementation of Paperless Paint 2016
- ✓ Universal Primer & Surface Prep Process
- ✓ Partial Blast of UHS Coated Tanks
- ✓ Technical Guide for Inaccessible Void Coatings & Treatments 2015

Upcoming Events

Event	Date	Location
SPC Panel Meeting	~ September 2026	TBD
NSRP All Panel Meeting	March 23-25 2027	Charleston, SC
AMPP Conference & Expo	April 11-15 2027	Columbus, OH
MegaRust	June 8-10 2027	Hampton, VA

Questions?

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