

NSRP Surface Preparation and Coatings (SPC) Panel Update

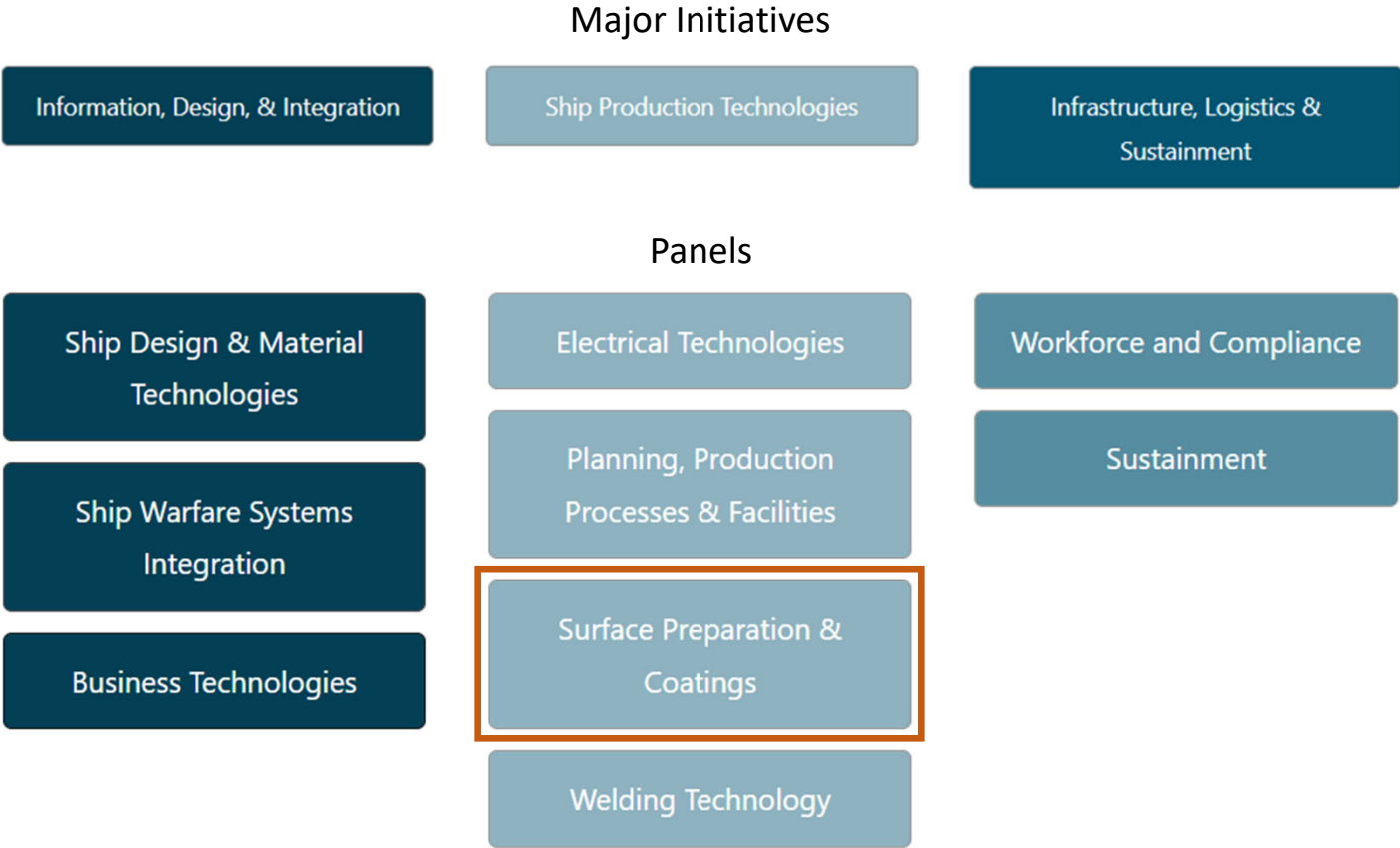
Conlan Hsu, Panel Chair
June 2, 2026 – San Diego, CA



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 – Patrick Kitchel
- 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 & Nate Livesey

Panel Officers

- Panel Chair – Conlan Hsu
- Panel Vice-Chair – Angel Zepeda
- TWH – Mark Ingle
- Eng Mgr – Nate Livesey

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

- ❖ *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*
- ✓ *Thermal Insulating Aerogel Filled Coatings*
- ✓ *Evaluation of Plasma Coating Removal & Surface Preparation*
- ✓ *Partial Blast of UHS Coated Tanks II*
- ✓ *Retention of Type VI Epoxy under Ultra High Solids*
- ✓ *Boomlift Carried Environmental Enclosure*
- ✓ *Implementation of Paperless Paint*
- ✓ *Universal Primer & Surface Prep Process*
- ✓ *Partial Blast of UHS Coated Tanks*
- ✓ *Technical Guide for Inaccessible Void Coatings & Treatments*

2019

2018

2017

2016

2015

FY26 Panel Project Solicitation

1K Oxsol (PCBTF) Free MIL-PRF-24635F Type V Comp 1 Coatings in OE Shipyards

- **Elzly Technology Corp**
 - BAE Jacksonville, HII-Ingalls, HII-NNS, NCP Coatings

Comparison of Laser Ablation to SSPC-SP Surface Preparation of Bare Steel

- **Elzly Technology Corp**
 - HII-NNS

Upcoming Events

Event	Date	Location
SPC x PPPF Joint Panel Meeting	July 28-29 2026	Brunswick, ME
SPC Panel Meeting	September 15-16 2026	Brecksville, OH
AMPP Conference & Expo	April 11-15 2027	Columbus, OH
MegaRust	June 2027	Hampton, VA

Questions?

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