

NSRP Surface Preparation and Coatings (SPC) Panel Update

Conlan Hsu, Panel Chair

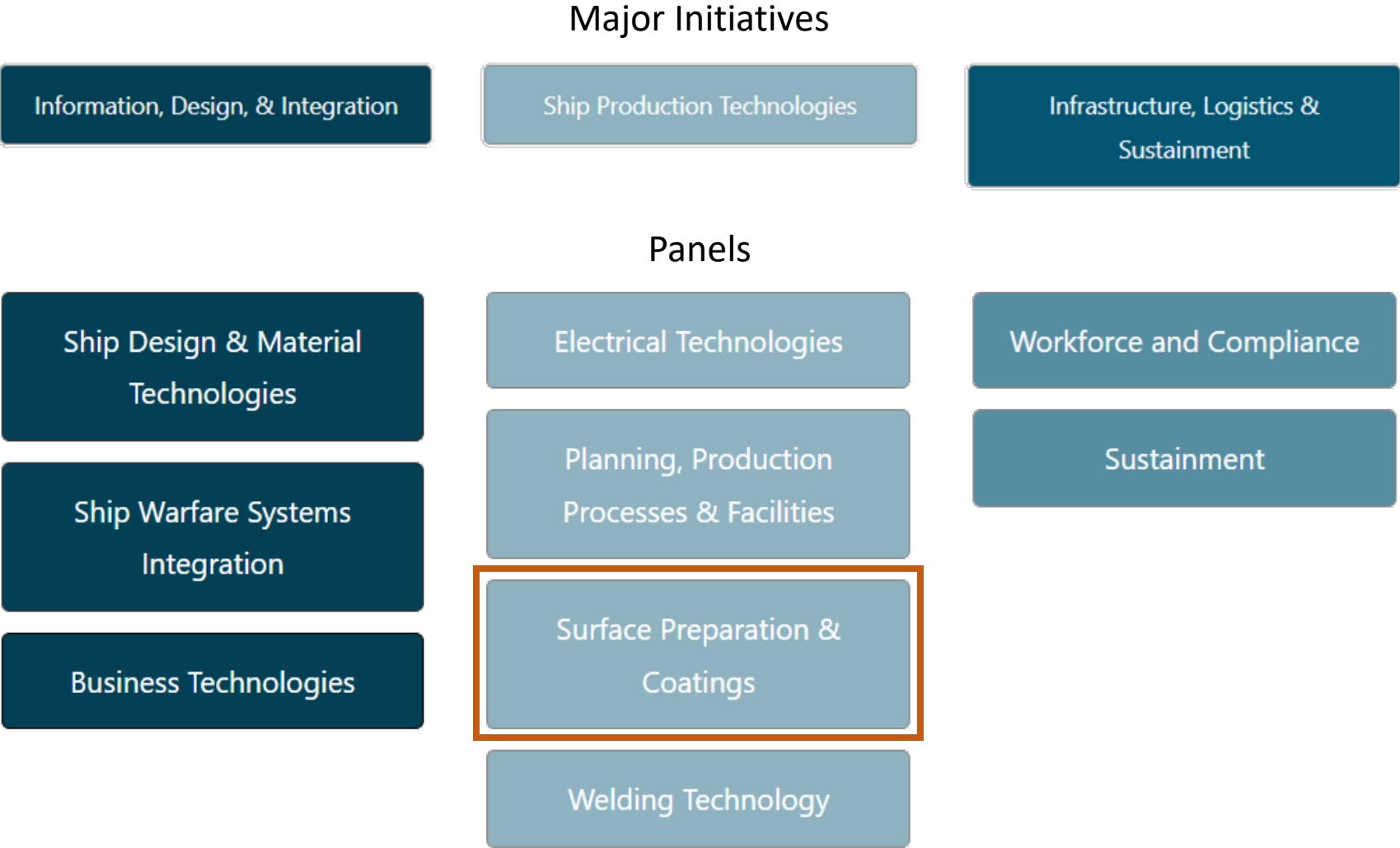
September 15, 2026 – South Bend, IN



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 Adkison
- 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@us.hii.com**

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

FY27 Panel Project Solicitation

- 53 total submissions (same as FY26)
- SPC received 11 projects (up from 6)
 - 4 participating Member Shipyards
 - 2 proposed by Member Yards as lead

FY27 Panel Project Solicitation

Engineering the Next Generation of Maritime Materials

- **SeaG3 Maritime**
 - Haddy Shipyard

Cold Spray Implementation Playbook for Navy and Government Fleet Sustainment

- **American Bureau of Shipping**
 - Austal, GD-BIW, USCG, Military Sealift Command, MARAD, Titomic, U of Alabama

Evaluating Best Practices for Spraying Epoxy Non Skid Coatings in Shipbuilding

- **GD-BIW**
 - Elzly, Graco, International, NCP Coatings, Randolph & Baldwin, Sherwin Williams

FY27 Panel Project Solicitation

Cobotic Laser Cleaning with Closed-Loop Focus Control for Repeatable Surface Preparation

- **University of Dayton**
- HII-NNS

Spray Application of Thermal Insulative Coatings (TIC)

- **Elzly Technology Corp**
- HII-NNS, Sherwin Williams

Evaluation of Plasma for Surface Preparation and Adhesion Applications

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

FY27 Panel Project Solicitation

Application Research of NanoTech Materials' Products for Fire Protection of U.S. Navy Ships

- **HII-NNS**
 - NanoTech Materials

Plug-and-Play Plasma Blast Cobotics

- **Hawk Technologies**
 - FMM, RTT, APS, Cahill Consulting, DotProduct, NWTC, Wildwood Coating

Alternative Solutions for Wire Spray Coatings

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

FY27 Panel Project Solicitation

Semi-Autonomous UAV Stripe Coating of External Ship-Hull Weld Seams

- **Apellix**
 - HII-NNS

Testing of a Single-Component 85+% Organic Zinc Coating with Current Approved Coatings for Naval Ship Decks

- **International Zinc Association**
 - GD-BIW

Upcoming Events

Event	Date	Location
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
SPC Panel Meeting	August/September 2027	TBD

Questions?

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