



**Product Design & Material Technologies  
Major Initiative Team Lead (MITL)  
2nd Quarter '08 Report**

**Barry Espeseth, PDMT MITL  
John Walks, PDMT Asst MITL  
June 4, 2008**



# NSRP Program Update

## Product Design and Materials Technologies Panel Meeting

**June 4-5, 2008**

**Seattle, WA**

# NSRP Program Funding



- **FY 2008:**

- Combined PEO funding (\$4.5M) and Congressional add (\$12M)
- Will cover:
  - » Phase 2 “tails” from FY2007 RA projects,
  - » Program operations,
  - » Phase 1 of FY2008 RA projects (details on next slide),
    - Available funding covered all submitted RA Projects
  - » New round of panel projects solicited in May 2008
    - Whitepapers due Aug 14
    - ECB selection in Sep, probably

- **FY 2009**

- Not in Navy budget, funding will require Congressional action
- Committee and key member staffs have been engaged
- Current Senate Authorization Bill has \$15M NSRP mark, House did not authorize NSRP. Appropriators’ action pending

# FY 2008 RA Projects



<b>Project</b>	<b>NSRP Funding</b>	<b>Est. Cost Share</b>	<b>Duration</b>
<b>Customization of Web-Based Planning</b>	<b>\$542K</b>	<b>\$530K</b>	<b>16 mos</b>
<b>Practical Applications of Design For Producibility</b>	<b>\$1.3M</b>	<b>\$1.5M</b>	<b>12 mos</b>
<b>SPARS 701</b>	<b>\$985K</b>	<b>\$1.1M</b>	<b>24 mos</b>
<b>Large Scale Computer Simulation</b>	<b>\$1.4M</b>	<b>\$1.1M</b>	<b>21 mos</b>
<b>Low Cost Pultruded Composites</b>	<b>\$1.1M</b>	<b>\$1.1M</b>	<b>36 mos</b>
<b>Remote Climbing Robot for Automating Welding</b>	<b>\$126K</b>	<b>\$186K</b>	<b>24 mos</b>
<b>Smart "As-Built" Model Modification</b>	<b>\$639K</b>	<b>\$666K</b>	<b>12 mos</b>
<b>Modern Shipbuilding Design</b>	<b>\$700</b>	<b>\$855K</b>	<b>12 mos</b>
<b>Virtual Welding Trainer</b>	<b>\$1.7M</b>	<b>\$316K</b>	<b>21 mos</b>
<b>Modeling and Simulation 2</b>	<b>\$1.1M</b>	<b>\$1.1M</b>	<b>12 mos</b>
<b>Totals</b>	<b>\$9.5M</b>	<b>\$8.4M</b>	

# NAVSEA Specifications Analysis



DEPARTMENT OF THE NAVY  
NAVAL SEA SYSTEMS COMMAND  
1333 ISAAC HULL AVENUE  
WASHINGTON NAVY YARD DC 20376-0001

IN REPLY REFER TO

5000  
Ser 05D/072  
22 Feb 08

## MEMORANDUM

From: SEA 05

Subj: SPECIFICATIONS ANALYSIS FOR TARGETED SHIP COST REDUCTION

1. This memorandum assigns specific tasking for Objective 1.4 related actions resulting from the 6-7 Feb 08 Commander's Forum. Objective 1.4 is Driving Costs Out of Ship Specifications and Components.

- **New initiative aimed at removing/revising the most costly specs, standards, requirements**
- **Wide-ranging, involves tech warrant holders, several NSRP panels, and shipyards technical experts**
- **Navy completed initial canvassing and analysis, then passed on details to the shipyards (thru NSRP) for feedback**
- **13 specifications identified for 1<sup>st</sup> round analysis,**
- **Shipyard Teams now analyzing these specifications and developing whitepapers for 6/11 issue.**
- **Navy and NSRP will then decide next steps.**

# Electrical Working Group



- **Group formed in response to Navy and Industry acknowledgement of the increasing complexity of Electrical work**
- **Representatives from:**
  - Bath Iron Works
  - Bender Shipbuilding & Repair
  - Bollinger Shipyards
  - NASSCO
  - NG Shipbuilding - Newport News
  - NG Shipbuilding - Gulf Coast
  - Electric Boat
- **Group has begun to identify, prioritize key issues and best opportunities for cost savings**
- **Group invited to participate in recent Panel Project Solicitation**
- **Shooting for a meeting in July at NGSB-NN**





# **NSRP MITL Update**

## **Product Design and Materials Technologies Panel Meeting**

**June 4-5, 2008  
Seattle, WA**



# MITL Objectives actively support the NSRP ASE Strategic Investment Plan

- **Ensure PDMT Projects are on schedule and deliverables support the Initiative's goals**
- **Keep the ECB informed on the PDMT activities and project status**
- **Develop and execute a plan to facilitate the development of meaningful projects for the upcoming RA that will produce identifiable ROI for the shipyards and our customers**
- **Coordinate interactions with our customers to ensure project cost savings/avoidance's are identified and tracked**
- **Update the SIP (as required) to reflect benchmarking and issued project deliverables data**
- **Act as conduit to inform shipbuilders on NSRP initiatives**

# FY07 PDMT Projects Status



## 1. Improved Affordability for Composite Structures

- **Participants:** NGSS ( Lead), KaZak Composites, Naval Surface Warfare Center
- **Objective:** To develop and demonstrate a low cost joining capability for pultruded composite panels to be used in place of the Vacuum Assisted Resin Transfer Molding (VARTM) processed panels.
- **PTR:** B. Espeseth
- **Accomplishments to date:**
  - Designed efficient joint design
  - Tested joint in small prototype
  - Now testing joint in production size (10' wide) panels
- **Status:** on schedule and within budget

## 2. Design for Producibility for Mid-Tiered Shipyards

- **Participants:** Bollinger, Todd, Atlantic Marine, Hepinstall Consulting
- **Objective:**
  - Deliver a comprehensive DfP guide
  - Reduce design lead times and costs
  - Identify and utilize DfP cost reduction principles
- **PTR:** John Walks
- **Status:** on schedule and within budget

# FY08 PDMT Projects Status



## 3. Low Cost Protruded Composites

- **Participants:** NGSS ( Lead), KaZak Composites, Material Sciences Corp
- **Objective:** To develop and demonstrate a low cost joining capability for pultruded composite panels to be used in place of the Vacuum Assisted Resin Transfer Molding (VARTM) processed panels.
- **PTR:** B. Espeseth
- **Accomplishments to date:**
  - Just completed a successful kickoff telecon

## 4. Practical Applications for Design for Producibility

- **Participants:** Bollinger, Todd, Atlantic Marine, Hepinstall Consulting
- **Objectives:**
  - Apply DfP Principles and Processes from last year's project.
- **PTR:** John Walks
- **Status:** Just completed a successful kickoff meeting in Seattle



# Miscellaneous MITL/NSRP Items

- **Strategic Initiative Plan:**
  - ECB talked briefly about a update at last meeting but not yet assigned
  - John Malone has provided latest Panel member listing so I can solicit feedback on SIP update when assigned
  - No mention since 2/08
- **NAVSEA NSRP Program Manager**
  - No new assignee to date
- **Small Business Investment R (SBIR) Solicitation**
  - The DoD SBIR 2008.2 solicitation has been released at <http://www.acq.osd.mil/osbp/sbir>
  - It includes two topics submitted by the MITLs/PCs in September 2007.
  - The DoD began accepting proposals on May 19, 2008 and will close to accepting proposals on June 18, 2008 at 6am EST.
- **Shipbuilding Applications for Industrial Lasers (SAIL) Forum 2008**
  - SAIL Forum 2008, coordinated by Penn State ARL, is scheduled for August 18-19, 2008 in Williamsburg, VA.
  - ECB has agreed to sponsor this event, participate in the planning of the Technical Forums, as well as participating in the Forum.
  - The NSRP contacts for further information are: Tonya Boney, Lee Kvidahl and Barry Espeseth.

# The Navy has decided to go forward with permanent access to CPC



## 1. Navy CPC Pilot Project Statement of Work included:

- Provide 7 Navy sites access to CPC thru the web interface function
  - Naval Shipyards
  - NAVICP
- Navy security certification (DITSCAP) of CPC
- Develop CPC Navy training curriculum
- Train 16 Navy personnel at 3 sites
  - Portsmouth Naval Shipyard, Kittery, Me.
  - Puget Naval Shipyard, Bremerton, Wa.
  - NAVICP, Mechanicsburg, Pa.
- Support pilot with a EB “help desk”
- Assist the Navy in their final assessment activities
- Project time period: 1/06 – 5/08.
- Pilot ceased operation 5/30/08

## 2. Navy CPC Access Discussions

- Now investigating funding sources, estimated costs and project requirements.

# Upcoming Meetings & Events



<u>Dates</u>	<u>Event / Location</u>	<u>Comments</u>
Jun 4-5	Product Design & Materials Technologies <i>Seattle, WA</i>	Panel Meeting
Jun 10-11	Crosscut Initiatives <i>Ketchikan, AK</i>	Panel Meeting
Jun 18-19	Facilities, Tooling and Risk Management <i>San Diego, CA</i> ECB Meeting**	Panel Meeting
June 18-19	Surface Preparation and Coatings <i>Virginia Beach, VA</i>	Panel Meeting
Jun 23-25	ASNE Day <i>Arlington, VA</i>	Conference
Jun 25-26	Environmental Technologies <i>Bremerton, WA</i>	Panel Meeting

# Upcoming Meetings & Events (cont)



<u>Dates</u>	<u>Event / Location</u>	<u>Comments</u>
Aug 1	Welding Technology <i>Ketchikan, AK</i>	Panel Meeting
Aug 5-7	Joint Panel Meeting (SPPT, BP, SYS) <i>Warwick, RI</i>	Panel Meeting
Aug 18-19	Shipyards Applications for Industrial Lasers (SAIL) 2008 <i>Williamsburg, VA</i>	Conference
Sep 3-4	Product Design and Materials Technologies <i>Bath, ME</i>	Panel Meeting
Sep 23-25	ASNE 'Engineering the Total Ship' Forum <i>Virginia Beach, VA</i>	Panel Meeting
Sep 30-Oct 1	Surface Prep & Coatings, Environmental Tech <i>Johnstown, PA</i>	Joint Panel Meeting



Questions?