

NSRP Update

**Product Design & Material
Technologies
(PDMT)
Panel Meeting**

May 9-10, 2006

San Diego, CA

Program Funding and Ops

- **FY06 funding (\$3.11M) in hand 3/22/06**
- **Final contracts out to primes 3/23/06**
 - » 6 ASE projects continuing FY05 efforts--\$1.6M
 - » 7 new panel projects--\$0.6M
- **Pursuing FY07+ long term funding prospects**
- **Strategic Investment Plan finalized**
 - » All corporate signatures obtained
- **Lean Forum 4 planning continuing**

Lean Shipbuilding & Ship Repair Forum 2006

September 12-14 Jacksonville, FL

- **Theme:** “*Shipbuilding Affordability Through Lean/Six Sigma*”
- **Technical Tracks**
- **“Crackerbarrel”**
 - Timed, facilitated small-group discussions on selected Lean topics
 - Response to LIG/other participants’ desire for more best practice sharing, less ‘teaching’
- **Dinner Speaker**
 - Jerry Bussell, Medtronic has tentatively accepted
- **Tours**
 - Ameritape (specialty tape & label stock)
 - Atlantic Marine (ship construction & repair)
 - Jacksonville Electric Authority (power generation)
 - Medtronic (medical technology mfg. & services)
 - NAVAIR Depot Jacksonville (aircraft engine overhauls)
 - Pilot Pen (writing instruments)
 - RexCorp (paperboard packaging)

Upcoming Conf. & Panel Meetings

<u>Dates</u>	<u>Event / Location</u>	<u>Comments</u>
May 9-10	Product Design & Materials Technologies <i>San Diego, CA</i>	Panel Meeting
May 10 – 11	Crosscut Initiatives <i>Mobile, AL</i>	Panel Meeting
May 16 – 17	Shipyard Production Process Technologies, Systems Technology and Business Process Technologies <i>Seattle, WA</i>	Joint Panel Meeting
May 16-19	International Marine Design Conference <i>Ann Arbor, MI</i>	UMich/SNAME/ASNE
May 23 – 24	Facilities, Tooling & Risk Management <i>Jacksonville, FL</i>	Panel Meeting
June 13 – 14	Surface Prep & Coatings <i>Norfolk, VA (tentative)</i>	Panel Meeting
June 21-23	Environmental Technologies <i>Mobile, AL</i>	Panel Meeting

Panel Activity Update

- **Panel projects are underway *(more details follow)***
 - All 7 projects on contract within 8 days of funding being received
- **Planning for spring & summer panel meetings underway**
- **Ship Production Symposium 2006**
 - Oct 11-13, Ft. Lauderdale
 - Panel Chairs supporting Paper Coordination effort

Panel Project Update

7 Projects awarded last cycle totaling \$571K in funding

Project	Panel	Status
Cold Wire Feed SAW	Weld	Ongoing
TipMate SAW Noxxles	Weld	Ongoing
STEP-NC for Steel Production	Sys	Ongoing
Panel Line Optimization (PLOPS)	SPPT	Ongoing
Workforce Preparation Improvements	CC	Ongoing
EPA Residual Risk Regulation – Part 2	Env	Ongoing
Surplus/On-Hand Material in CPC	PDMT	Ongoing

Project	Panel	Status
Lessons Learned for Coatings	Surf	ITAR Resolved – 2 MSC ships (USNS SISLER & POMEROY) selected for study

NSRP-Related Tentative Funding Opportunities

- **SBIR**
 - **FY05 1st Cycle** **5 Phase I Projects Completed**
4 Phase II Awards In-process
 - **FY05 3rd Cycle** **6 Phase I Selection Made; Contracts**
Awarded
 - **FY06 1st Cycle** **3 Phase I Awards Approved (in**
Contracting)
 - **FY06 2nd Cycle** **May 1 2006 Topic Announcement**
 - **FY06 3rd Cycle** **Aug 1 2006 Topic Announcement**
- **STTR** **FY07 typically \$.5M-\$1.5M**
- **Navy ManTech** **FY07 typically >\$30M annually**
Shipbuilding Initiative
(not planned, but ...)
- **Shipbuilding Industrial**
Base Improvement Pgm ?? \$??
(don't know funding origin or
NSRP role if any)

SBIR FY2006 Round 1 – Submitted Topics

Three Phase I Awards in Process – 2 SPC Related; 1 SPPT Related DoD
*Two Phase II's will Result from this Solicitation
(Estimated Total \$1.7M per Navy-selected 'topic'
projects)*

- **N06-061 In-Situ Application of Powder Coating Technology**
 - OBJECTIVE: Develop and implement an innovative approach for the in-situ application of power coatings to confined and/or constrained spaces at a greater thickness than current application methods will allow
- **N06-062 New Approaches to Shipbuilding Finishing and Assembly Operations**
 - OBJECTIVE: The objective of the project is to develop and implement new, innovative in-situ field manufacturing and finishing technologies that can impact the cost and cycle time to construct, modernize and repair Navy ships

SBIR FY2006 Round 2 – Submitted Topics

Topics will be posted on DoD website in May 06; DoD *Proposal Acceptance will begin 6/14/06.... approx \$2.0M per projects under this Solicitation*

- **Advanced Environmental Monitoring Technology for Domestic Shipbuilding**
 - Sensor technology , systems development and wireless technology for real-time NESHAP limit monitoring of storm-water and industrial waste water run-off
- **Improved Technology to Nondestructively Test Marine Aluminum Structures**
 - Rapid, nontraditional surface inspection methods focused on fatigue cracks
 - Field methods to determine sensitized 5XXX aluminum plate

SBIR FY2006 Round 3 – Submitted Topics

If selected, topics will be posted on DoD website by 8/1/06; DoD *Proposal Acceptance will begin 9/15/06.... approx \$2.0M per Navy-selected Phase I and II Projects*

BOTH TOPICS CAME FROM PDMT

- **Design and Planning Tools**

- Develop rule-based design and engineering support to allow aid in rapid decision-making on common shipbuilding issues (i.e. weld planning, Material availability and alternative selection, life-cycle data (corrosion data/repair history information database)

- **Seamless Integration of Design Model Information**

- Methods to facilitate seamless transmission of design data between different design software systems
- Methods to reduce the time and effort to populate the final product model with design data

PDMT SBIR Topics

NOT SELECTED, BUT STILL ON HAND FOR CONSIDERATION

- **C4ISR Knowledge and Information Reuse**
- **Parametric and Standards Based Ship Designs**
- **Digital Notebook: producibility requirements, production engineering best practices and construction lessons-learned**
- **Shipboard Flush Air Data Sensing System**
- **Design of Large, Next-Generation Composite Ship Structures**
- **Improve Work Performance within the Shipbuilding Environment**
- **Weld Planning and Engineering and Process Integration**
- **Ultra-Compact Waste Disposal System for Small Combatants**
- **Active Cooling of Shipboard Electronic Equipment**
- **Friction Stir Joining - Design Considerations**
- **Non-flammable Acoustic Insulation Coatings**
- **Distributed Collaborative Decision Support for Shipbuilding PDMT**
- **Laser Peening of Alloys for Improved Life and Crack Resistance**
- **Application of Software to Foster LEAN Implementation**

Next Research Announcement

- **Highlighted Major Initiative areas from SIP**
 - Shipyard Production Processes (6 sub-initiatives)
 - Business Process (6 sub-initiatives)
 - Product Design & Materials (4 sub-initiatives)
 - Systems (9 sub-initiatives)
 - Facilities, Tooling & Risk Management (4 sub-initiatives)
 - Crosscut (5 sub-initiatives)
- **Specific Interest Areas**
 - Lean/Six Sigma Enterprise Concepts
 - Enterprise Integration / Interoperability Enabling Concepts
 - Design For Production / Production Engineering
 - Others as recommended by Navy PEOs
- **Open, collaborative projects w/ broad applicability**
- **Rapid execution**

Call for Panel Whitepapers

- **ECB has not yet approved the plan, but the following assumptions are not unreasonable:**
 - Anticipate release **this summer** coincident with next Research Announcement
 - Nominally \$600K in funding
- **Panels encouraged to begin whitepaper development now**