



## Welding Technology Panel

Meeting Minutes  
April 15, 2010

### Opening

Vice Chair Mike Sullivan called the spring meeting of the NSRP Welding Technology Panel to order at 8:30am on April 07, 2010 in South Padre Island, TX.

### Members and Guests Present:

See Attachment A

### Approval of Minutes

The minutes of the previous meeting were approved.

### Introductions

All members, associate members and guests introduced themselves.

### NSRP Panel SP-7 Membership Report

The only change noted was Mike Ludwig in now an associate member since he has left a ship repair company and that Mike Sullivan of NASSCO was elected Vice Chair to fill the unexpired term of Mike Ludwig.

### Chair Report

Lee Kvidahl gave a brief report on the following items:

- The ECB approved two welding projects for funding
  - Development of a Portable Friction Stir Welder. Team members include NSWC-CD, Wichita State, and Engineering Consulting Services
  - Economic Study for the Implementation of LHAW in Shipyards. Team members include Penn State ARL, Bollinger and NGS. Fronius USA has offer in-kind support.
- The ECB was not overly happy with the projects the welding panel submitted, saying they were not up to the technical nature they have been in the past.
- The ECB indicated that more emphasis will be placed on implementation in the future when projects are reviewed and down selected.



- SNAME Ship Production Symposium – November 3-5 in Seattle. They would like to see more Welding Presentations but it is difficult since the AWS FABTECH/Welding Show is will be November 2-4 in Atlanta.

## NSRP Report

Tom Hite gave a report on the following items:

- New NSRP Program Manager, Connie Bowling, has leveraged changes to NSRP. The program has moved organizationally to a higher level (00E) which should help secure stable funding in the future. Current funding allocated from PEO budgets will keep funding at \$15M for FY10 & FY11. The move to 00E should help create a distinct funding line starting in FY12.
- Based on the Key Priorities of the Navy's leadership the following focus areas will be a critical part of project funding decisions in the future:
  - Energy – Power (Evolution to a Green Fleet)
  - Quality Improvement
  - Reduction of Total Ownership Costs
- NSRP will be developing a standardize format for all projects to following when giving presentations. Emphasis will be on meeting one of the three areas above and actual implementation of the project/technology into either a ship or into production processes for building or repairing ships.
- ONR MANTECH – funding is about \$50M-60M for FY10 and FY11. Targeted areas for funding are:
  - VA Class – this is the number 1 priority for the program
  - CVN – There is a desire to see more projects in this program to help reduce costs
  - DDG1000 – The funding of projects for this program is ramping down since there is no real ROI with a max class of three ships (only 2 currently contracted).
  - LCS – This program has a high potential for funding. NAVSEA is concerned with technical and producibility issues of aluminum especially if large-scale aluminum fabrication needs to take place. A down select of which ship design (Freedom vs Independence) is favored by Navy is scheduled for this summer. The initial contract is to be for 10 ships by the yard doing the first two ships under construction currently (either Austal or Marinette Marine). Also, there will be a second RFQ for an additional 5 ships, not to be built by the winner of the first set of ships. This will open up possible LCS construction at any shipyard in the country.



- SBIR Program – The formal call for papers/topics goes out at least three times a year and ONR is encouraging small business to look at the website and submit topics for possible funding.

### **Panel Project Reports**

- PreQualified PQR/WPS – Gene Franke, NSWC gave a short overview of the status of this project in Harvey Castners' absence
- Prototype Portable Friction Stir Welder – Project has just started so no update was given
- Laser Hybrid Welding Economic Viability Study – Project has just started – no update

### **Technical Reports**

- Weld-Ed (presentation was on agenda but speaker was unable to make session)
- NDT of Marine Aluminum Structures – Carl Edwards, Micro Systems
  - A presentation on a different way to NDT Marine Aluminum to detect linear discontinuities was given along with a demonstration of the technology. See Attachment B for the presentation.
- Comparison of SAW & Tandem GMAW for Productivity & Distortion Control – Ken Johnson, Todd Pacific Shipyards
  - A presentation of a new project to compare the welding of square butt joints by Tandem GMAW to the existing method of SAW was given. See Attachment C for the presentation.

### **Tour of Keppel Amfels**

George Baldree gave the group a tour of Keppel Amfels yard. Keppel manufactures offshore Jack-Up Rigs and other platforms.

The tour concluded the first day of the meeting.

### **Thursday, April 08, 2010**

### **Additional Presentations**

- Advanced Laser Hybrid Welding – Mike Ludwig, Fronius
  - Presentation on LHAW developments including LHAW-Tandem and LHAW with three wires – See Attachment D for the presentation



- Orbital LHAW of Pipe – Paul Blomquist, ATS
  - As a follow on to the first LHAW presentation, a video of a demonstration of orbital LHAW of pipe was shown.

### **Next Meeting**

The following locations are under consideration for the next meeting for late summer or early fall. As per panel protocol, the shipyard members will take a vote on the location for the next meeting .

- CTC, Johnstown, PA
- EWI, Columbus, OH
- Fronius, Brighton, MI
- Idaho National Energy Lab, Idaho Falls, ID
- Lincoln Electric, Cleveland, OH
- Miller Electric, Appleton, WI
- Penn State University, State College, PA
- University of Kentucky, Lexington, KY
- Wolf Robotics, Ft.Collins, CO

### **Adjournment:**

Chair Kvidahl officially adjourned meeting at 10:00am.

Minutes submitted by:

Mike Ludwig