

Executive Summary

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This is a summary of the 106th AmeriTAC meeting and related meetings held at the Hutton Hotel, Nashville, TN, on 10-12 October 2011.

Attendance & Participation

Here are the attendance and participation statistics for the meeting:

- 85 Total Attendance including Project Team, Project Development Committee, and AmeriTAC Meetings.
 - 40 Member Companies represented
 - 2 New Members:
 - Polycorp – Dennis Nolan (TAC/DR)
 - Webco Industries – Bill Bieber (DR)
 - 2 Potential Members:
 - Ascend Performance Materials – William Paden
 - Cabot Corporation – Mark Stovall
 - 2 Guests:
 - Asset Optimization – John Aller
 - Carter, Ledyard & Milburn – Robert McTamane (MTI Attorney & MTI Fellow)
 - 56 Forum Questions submitted and discussed
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Presentation – Clad Metal: Options, Applications, Issues

John Banker, Vice President Customers and Technology at Dynamic Materials Corporation, gave a presentation titled "Clad Metal – Options, Applications, Issues".

The presentation was intended to provide a broad overview of the clad metal industry and to address features and concerns related to clad. It discussed the industrial clad metal manufacturing processes, both for metallurgically bonded clad options and partial clad metal lining options, and discussed process attributes, strengths and weaknesses.

Presentation – PTFE World Status with Emphasis on Lined Pipe

Mike Pryor, Corporate Product Manager of Corrosion Resistant Products at MRC – McJunkin Red Man Corporation, gave a presentation titled "PTFE World Status with Emphasis on Lined Pipe". The presentation:

1. Briefly described the origin of PTFE (Teflon®) resin as *fluorspar* and the mineral's other demands in the global market, and how plastic production competes for the ore supply.
 2. Identified some of the major manufacturers of PTFE resin and how the past several years' trends have caused lower overall production trends.
 3. Identified recent environmental impact on resin manufacturing.
 4. Updated current and expected midterm changes in supply and demand.
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Thermal Spray Applications Seminar

A special seminar, "Thermal Spray Applications Seminar," was held for MTI members only on Monday, 10 October 2011. Presentations on the following topics were given:

1. Industrial engine component repair using thermal sprays for dimensional and application-driven restorations, including discussion of thermal spray properties and selections as alternatives to plating. (Rick Kowalski/MT R&O LLC)
2. Overview of the range of thermal spray techniques (including Kinetic Spraying) and laser cladding technologies, as well as their critical application requirements and a discussion of materials that are applied and some examples of industrial applications and environments where these technologies are used in industry today. (Michael Breitsameter/FW Gartner)
3. Influence of nano- and near-nano grains on the mechanical properties of light alloys and carbides in powder metallurgical (PM) and thermal spray coating applications. (Robert Gansert/HFW Industries)
4. Overview of the factors affecting coating performance addressed in our companies internal standard M4M, including discussion of application techniques, specifications, and quality

control parameters, together with methods for measurement and suggested specification limitations. (Paul Eyre/DuPont)

5. Overview of ceramic thermal spray coatings including properties, applications, and related examples. (Scott Paschke/Cincinnati Thermal Spray)

3 Projects Approved

AmeriTAC and BOD approved 3 projects:

- 2nd FRP Inspection Training Program (\$45,000)
- Global FRP Standards Review (\$70,000)
- Evaluation of Tantalum Welds (\$11,440)

3 New Project Teams Formed

3 new potential project teams formed during AmeriTAC 106:

- Distributed Passive Sensors for FRP Applications (pv)
- Translation of MTI Documents (pw)
- Welding Casting Alloy 20C-32Nb (px)

Future Meetings

Here are the MTI meetings scheduled to date:

- AmeriTAC 107 – Marriott Hotel, Hollywood, FL, 27 February – 1 March 2012
- EuroTAC 2012 ~ 28-30 March 2012, DECHEMA
- AmeriTAC 108 – Edgewater Hotel, Seattle, WA 18-20 June 2012
- AsiaTAC 2012 ~ Shanghai, China, September 2012
- AmeriTAC 109, Omni Hotel, Austin, TX, 22-25 October 2012

Project Team Meetings

These 21 project teams met during AmeriTAC 106. Project numbers are in parentheses with alphabetic (ab) denoting potential projects and numerical (123-08) denoting funded projects.

- Accelerated Testing of FRP (196-10)
- Chemical Resistant Masonry Manual (ok)
- Corrosion of Extruder Alloys (ps)
- Design, Installation, Maintenance, and Inspection of Plastic Lined Pipe (pc)
- Duplex Alloy Microstructures (200-10)
- Evaluation of Tantalum Welds (pn)
- General Nickel Alloy Seminar (on)
- Global FRP Standards Review (oh)
- High Temperature Alloy Microstructure Atlas (192-09)
- Investigation of Technologies Common to Other Industries (ph)
- Metals – Who Makes What? (or)
- Metal Dusting Projects (188-08 and 198-10)
- Permeation through Polymers (206-11)
- Pneumatic Leak Testing of Heat Exchanger Tubing (199-10)
- Prediction and Detection of Hydride Formation in Titanium (pa)
- O-ring Identification (201-10)
- Revision of MTI Publication #15 Stress Corrosion Cracking (pq)
- Rouging Phase 2 (187-08)
- Thermal Spray Coatings Training (ow)
- Welding Duplex Alloys (pl)

Project Development Committee Meetings

Project Development Committees (PDC) match members' needs with new and existing technologies to identify new potential projects. These 6 PDCs met during

AmeriTAC 106:

- Ceramics PDC
- Integrity and Condition Assessment PDC
- Knowledge Management PDC
- Metals PDC
- Polymers PDC
- Prediction of Materials Degradation PDC