

Project Development Committee Updates:

New Materials PDC – Metals:

Presentation, *Nanocrystalline Coatings for Improved Oxidation Resistance*, was given by Susan Kerber of Material Interface Inc.

New Materials PDC – Polymers:

During the meeting three potential projects were identified, but project teams were not yet formed:

1. Thin Film Coatings with High Insulation Value
2. Field Applications of Polymers, such as Flame Spraying
3. Tightening the Specifications for Elastomers, such as O-rings

These will be discussed in more detail at the June 2006 meeting.

Project Team Updates:

Valve Casting Specification (Ix):

The group heard a presentation by Malcolm Blair of SFSA on the use of solidification modeling to predict probable areas of shrinkage and x-ray defects. As a result, the group is exploring a possible round robin program in conjunction with SFSA and a number of high alloy foundry members. We also plan to approach the Materials & Corrosion section of API to see if they would be interested in joint funding of this effort.

Continuously Improving and Evergreening RBI (mk):

A team to run a workshop on improving and evergreening RBI was formed. The target date for the workshop is the February 2007 meeting. Ricardo Valbuena is the Champion. Members are asked to submit contributions of case studies.

Advanced Intermetallics & Alloy for Ethylene Crackers (137-00):

Vinod Sikka of Oak Ridge National Laboratory has informed us that the final report for this project has been delayed from January until the end of March 2006.

Progress Report – Characterization of Nanoparticles (171-06):

The project team for this DOE funded project was not scheduled to meet at the February MTI meeting. However, during January and February, MTI staff participated in the planning and execution of two sets of experiments to measure particle size and particle size distribution of nanoparticles. The experiments were successful. The results demonstrate the feasibility of a need identified in the Nano-Roadmap. The need identified was the measurement of particle size and particle size distribution in real time during the production of nanoparticles and for ESH (Environmental/Safety/Health) studies. DOE approached MTI to participate in this project because of its long-standing affiliation with the chemical industry and with Oak Ridge National Laboratory. The Vision 2020 steering team (the team that is coordinating the implementation of the Roadmap for the chemical industry) was asked by NNI (National Nano Initiative) to coordinate development of the Nano-Roadmap. A third set of experiments is scheduled for March. The results from the three sets of experiments will be presented at a future MTI meeting and to DOE in Washington.

Nano-Highlights:

The application of Nano-Technology to materials continues to develop. The literature, both technical and general publications, is growing by leaps and bounds. Keeping up with the literature is time consuming. In an effort to help MTI members, there are some selected Nano-publications on the MTI table outside of the TAC meeting. We invite you to look at the selected items. The staff invites feedback on whether you would like nano-material of this sort displayed at future meetings.

TAC Meeting Presentations:

- *Metal Dusting Update* – William Watkins/Air Products & Chemicals
- *Technology Information Research Capabilities of Nerac Inc.* – Candace McKeon/Nerac Inc.

Zoomerang Software:

MTI has licensed Zoomerang web-based software to conduct surveys. It has already been extremely helpful in obtaining opinions on MTI publications and information on history of failures in glass lined equipment. The software enables users to create professional, customized surveys. PDC's and Project Teams can use this software to obtain opinions of members who are unable to participate in meetings or telephone conferences. It is also an ideal way to elicit opinions of TAC representatives as well as employees of member companies who are not present at TAC meetings. Contact Barry Greene (973-625-0226 – bgreene@mti-global.org) for additional information. He will help create, distribute, and evaluate surveys for any MTI members requesting help.

OSHA Releases 2005 Top 10 Violations:

Safety is a key element of MTI's mission, and the sharing of information is also a key part of MTI activities. In that spirit, we share the following safety data that OSHA provides each year. OSHA provides a list of its most violated standards in each fiscal year. The data for 2005 is shown in the table below:

Type of Violation	No. of Violations
Scaffolding	8,891
Hazard Communication	7,267
Fall Protection	6,122
Respiratory Protection	4,278
Lockout / Tagout	4,051
Powered Industrial Trucks	3,115
Electrical Wiring	3,077
Machine Guarding	2,956
Electrical Generator Requirements	2,348
Ladders	2,276

The Engineer Dictionary: What engineers say and **What they mean by it**

- The designs are well within allowable limits.
We just made it, stretching a point or two.
- Project slightly behind original schedule due to unforeseen difficulties.
We are working on something else.
- Essentially complete.
Half done.

MTI Meeting Attendance Statistics:

- **84 Attendees**
- **38 Member Companies**
- **1 New Member – Syncrude Canada**
Stefano Chiovelli is representing Syncrude Canada at the TAC 89 meeting. The DR and TAC Representative, Mike Anderson, plans to attend the next MTI meeting in St. Louis MO.
- **3 Potential Members:**
 - Weiji Huang / The BOC Group
 - Jay Zhang / Corning Inc.

Late Registrations:

- David O'Donnell / RathGibson
- Brian Tholke / Procter & Gamble

Upcoming MTI Meetings:

- **EuroTAC 2006** – April 25-27, 2006 at Lindner Hotel, Leverkusen, Germany
- **TAC 90*** – June 5-8, 2006 at Millennium Hotel, St. Louis MO
- **TAC 91** – October 23-26, 2006 at Dallas-Addison Marriott Quorum by the Galleria, Dallas TX

***Take Me Out to the Ballgame:**

The Cardinals will be playing Cincinnati at home in June during our meeting in St. Louis MO. We plan on getting tickets for a game in the new Busch Stadium, which is just down the street from the Millennium Hotel. Watch for more information and plan to join us.

Engineers Week:

Engineers Week, a consortium of more than 100 professional and technical societies and major U.S. corporations, is slated for February 19-25, 2006. The program aims to ensure a diverse and well-educated future engineering workforce by increasing understanding of and interest in engineering and technology careers among young students and by promoting pre-college literacy in math and science. Now in its 56th year, Engineers Week also raises public understanding and appreciation of engineers' contributions to society and is among the oldest of America's professional outreach efforts. ***Engineers make a world of difference!***