

Lively Discussion Highlights 2005 MTI EuroTAC Meeting

By Kirk Richardson, freelance journalist

When MTI held its second annual European Meeting in Breukelen, Netherlands last spring, it was much more than a repeat of its US-based TAC meetings. According to MTI's Galen Hodge, the meeting was similar in organization, but the content was different. "This meeting concentrated on two specific topics that had been indicated by the European group to be of interest to them," explained Hodge. "The specific sessions were on the subjects of Corrosion Under Insulation (CUI) and Risk Based Inspection (RBI)."

Hodge said that the highlight of the meeting was the dialogue that developed during the discussion phase of the meeting. "This indicated to me that we had established an agenda that was of specific interest to the membership," he said.

John Houben led off technical discussions with a presentation concerning the CUI practices used at ExxonMobil. Houben indicated that 84% of ExxonMobil's leaks were in piping of 4" and under. Fixed equipment maintenance is their largest single cost and piping is 55% of this cost. Exxon wants a 25-30 year service life without inspection so has adopted aluminum as the barrier of choice. Houben also mentioned that the Dutch Corrosion Group (CCDPI) was working with several companies to develop standards for CUI prevention. These standards are available for members on the CINI website.

Mark Winkelmans of BASF, Hans Raaphorst of Dow Chemical, Clive Breedon of BP, and Toon van der Meer of Lyondell Chemical also discussed their experiences and companies' best



practices for preventing CUI. Toon van der Meer demonstrated how his company has reduced their failures from CUI to almost nothing by exercising control in critical areas of the equipment.

In the afternoon session, Barry Greene and Emory Ford, both of MTI, presented updates on two projects that are in progress. Greene presented a review of the "Welding of Clad Titanium Plate" project and Ford presented a review of the "Metal Dusting Project" being conducted by Argonne National Laboratories.

Neil Henry opened the discussion on Thursday by presenting information on Risk Based Inspection. His presentation discussed work done by the HSE in England and stressed that RBI is different from industry to industry and not a one size fits all system. He commented that the RBI document should be a live document where you are trying to improve the system over time and not just save money; although, if done correctly, cost savings should accrue.

Gerard Weersink of Akzo Nobel, Matthias Pfaffelhuber of Bayer, van der Meer, Houben, and Ford also presented information on RBI. Ford reviewed

the process that MTI had used to generate its RBI Manual, which presents a "tutorial" or "how to" on Risk Based Inspection for the Chemical Industry. It should enable operating companies to understand RBI, both its benefits and limitations.

Hodge is optimistic about EuroTAC's future. "We had a larger number of participants at this meeting than the first meeting," he said, but added that the event conflicted with another meeting of interest to member companies; however,

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Materials Technology Institute, Inc. (MTI) is a unique, cooperative research and development organization representing private industry. Its objective is to conduct generic, non-proprietary studies of a practical nature on the selection, design, fabrication, testing, inspection, and performance of materials and equipment used in the process industries.

MTI Seminars

RBI Manual Roll Out

Over 70 members and non members attended the roll out of the MTI manual on *How to Implement Risk-Based Inspection* at the February 2005 meeting in Tampa, Florida. RISK-BASED INSPECTION (RBI) is the latest model for effective maintenance and inspection. RBI prioritizes inspection and associated maintenance activities on the basis of risk. However, RBI should be considered in a wider perspective as a work process within an overall Risk Management Program.

RBI is increasingly being used in the Chemical Process and the Petroleum/Refining industries with vendors offering a wide variety of services in connection with RBI. There is a significant amount of confusion and misunderstanding about this work process and technology. This book is intended to go beyond selling a methodology or assessment tool, which has been the main purpose of most literature previously written on this subject. The purpose of this book is to present a tutorial or "how to" on Risk-Based Inspection Program

Implementation and Evergreening for the Process Industry. This tutorial will enable operating companies to better understand Risk-Based Inspection – both its benefits and limitations.

This MTI document presents common sense instructions on a variety of topics including:

- "How Do You Demonstrate the Value of RBI vs. Conventional Inspection Strategies to Your Company",
- "How to Implement Risk-Based Inspection",
- "RBI Considerations in Plant Design",
- "RBI – An Insurer's Perspective", and
- "Maintaining or Evergreening RBI Programs After Implementation" an important topic since RBI should not be viewed as a one-time exercise but rather an on-going process that helps us manage inspection and mechanical integrity in our facilities.

To ensure maximum objectivity, input from both owner-users and vendors is included in this publication which will be published by the end of the year.

Reactive Metals Seminar

44 MTI members attended the Reactive Metals Seminar held June 6, 2005 at the Marriott Country Club Plaza, Kansas City, MO to hear speakers discuss:

- Reactive & Refractory Metals Applications in the Chemical Process Industry
- Use of Zirconium in Monomer Production with Sulfuric Acid
- Titanium in Pulp Mills Today
- Gasketing Requirements: Corrosion Influence of Elastomeric Products on Specific Metals
- Comparison of Reactive with Non-Metallic Materials of Construction for Process Equipment
- Reactive Metal Heat Exchangers: Design and Operation Issues
- Reactive Metal Cladding
- Fabrication Options for Titanium & Zirconium Pressure Vessels: A Discussion of Clad and Solid Construction
- Tantalum Equipment Fabrication
- Reactive and Refractory Metal Field Repairs
- Safety Concerns and Issues

The presentations are available to members from the St. Louis office.

MTI Company Representatives Sound Off on the Benefits of Membership *By Kirk Richardson, freelance journalist*

A quick search for MTI on Google produces a long list of organizations, everything from Music Theatre International to The Ministry of Trade and Industry. Dig a little deeper and eventually you'll find a link for the Materials Technology Institute, located at www.mti-global.org.

In this day and age of ubiquitous professional organizations, where a single internet search yields hundreds of results, the Materials Technology Institute does a good job of standing out from the crowd. At least that is the impression given by some of its members.

"We see MTI as a great way to leverage our very limited resources," says Gary Whittaker, a Materials Engineer at Eastman Chemical. "MTI provides a body of experts who I know and trust and to whom I can go for help. Sure there are materials oriented chat rooms on the internet, but you don't know the people or their qualifications. MTI provides colleagues who I know will help when I need it."

"Then there are the projects. We have found the projects to be valuable to our operations and continue to see value

being created by the project work. In my opinion, MTI is the premier materials organization for the CPI, and it would be a huge mistake for us to not participate as fully as possible."

"Eastman's investment in MTI has paid off many times over," says Whittaker, who's been a member since the late 1980s. "We have gotten answers to many questions that resulted in direct cost savings to Eastman. Typically we cover the cost of participation each year in MTI related cost savings."

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Changes at MTI

NEW LEADERSHIP

TAC Chair: John Aller, Capstone Engineering

TAC Vice Chair: Srin Kesavan, FMC Corporation

John's goals are to:

- Complete the organizational changes within the TAC
- Identify and take on the Grand Challenge
- Balance projects between short term and long term (make sure they all fit on the roadmap)

BOD Chair: Gary Whittaker, Eastman Chemical

BOD Vice Chair: Dale Heffner, Electro Chemical Engineering and Manufacturing

Gary believes the primary responsibility of any BOD is the future health of their organization so he launched strategic planning initiatives upon taking office last October. The BOD spent time at the February meeting beginning the process with a SWOT analysis, then reconvened in March and with the aid of a facilitator came up with a plan which was refined at the June meeting. The results will be released at the October 2005 meeting.

NEW STAFF

Associate Directors:



Barry Greene joined the MTI staff in July of 2004 and brings 30+ years of experience as a materials engineer with ABB Lummus and BASF. He was a member of the MTI Board of Directors from 1994 – 2002. In his application he noted "MTI is a one-of-a kind organization. It has collected, developed, and published information that has been vital to the industry. It would be wonderful to be part of that continuing effort."



Tony Scribner joined the MTI staff in July 2005 and brings 35 years of experience in the industry and has participated in MTI as the rep for Union Carbide and Special Metals. He indicated in his application "It would be an honor to assist MTI in continuing to develop the needed research for solving our many materials problems and in transferring this research into useful technological practice. The identification and development of new and leading edge technology to enable the members of MTI to do their jobs better and faster has been the hallmark of MTI leadership and I have always been committed to this goal."

OFFICE STAFF



Debbie Linder, Administrative Assistant, joined the St. Louis staff in August 2004. Debbie has over 10 years experience assisting staff in the insurance and aerospace industries. She enjoys helping the MTI members obtain access to the MTI web site and coordinating Project Team tasks for the Associate Directors.

2005 MTI EuroTAC Meeting

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er, Hodge said that the response of the members present was very encouraging. "They indicated that they had received value from the meeting, so I'm hopeful that we can build on that and see larger attendance in the future."

Speaking of future meetings, EuroTAC participants indicated a desire to separate the European event from other similar conferences. "They are interested in focusing on some specific topics as we did last time and also to include some educational seminars as part of the agenda in future meetings," according to Hodge. "They were definitely interested in continuing to hold one meeting per year." Next year's annual event is slated for Spring 2006. Visit mti-global.org for more information as it becomes available.

In Memory of Tom Gibbs

Thomas W. Gibbs, former Executive Director of MTI, died Friday, August 12, 2005 at age 72 after a valiant fight with lung and brain cancer. Tom received bachelor, master and doctorate degrees from the Massachusetts Institute of Technology in Cambridge, Mass. After serving in the Air Force for two years, he returned to New England to work for AVCO Corporation and resumed his doctoral studies at MIT. He completed his studies in 1965 and joined the DuPont Company as a research metallurgist. During his 26-year career with DuPont, he initiated and supervised a wear resistant materials research and development program, served as the manager of a wear resistant parts venture, and became the manager of engineering materials and mechanical consultants. When he retired from DuPont in 1991, he joined the Materials Technology Institute as Associate Director and became Executive Director of MTI in 1995, resigned from that position in 1998 and stayed to assist in consulting until the year 2000. Tom believed strongly that MTI belonged to its members and that the original spark of vision had turned into a bright flame of service to the members and the industry which he was proud to support during his tenure on staff. Tom is survived by his wife, Carole of Wilmington, DE, their three daughters and two grandchildren.

MTI Company Representatives Sound Off *(continued from page 2)*

On the other end of the spectrum, The Roberts Company has been an MTI member for one year, and the association is already paying off. "With the key contacts we have made in this short period, our membership has paid for itself for the next couple years!" says company representative Kelly Wyrough. She adds that the biggest benefit her company has realized is "up front knowledge of new materials and solutions to problems that don't just occur in just one plant." Wyrough also mentions that the meetings are valuable. "Three times a year we can meet face to face with experts in the industry who help solve critical issues."

"What other organization is out there that can provide expertise to your questions in a matter of minutes, in most cases? As a member of MTI you can send critical questions to the most mind boggling problems your plant may have, and in most cases, have an answer that will help you work through your problem. I do not believe that there is a week that goes by that I do not contact an MTI member for help in their area of expertise. Being a member allows you to know the top experts in the field."

Whittaker believes that getting involved is the key to making MTI a successful investment of time and money. "My company has found that we get the most bang for our MTI membership dollar by participating as fully as possible in all the organization has to offer," he says. "In this way we get to know all the people and we are able to shape projects to meet our needs when that is appropriate. It also provides a fantastic training opportunity."

Dow Chemical has been a charter member of MTI, having joined in 1977. "At the time, Dow saw an opportunity to leverage its resources to solve long-standing industry problems related to corrosion and metallurgy," says Dow Materials Engineer Eugene Liening. "Since then, of course, MTI has grown in size and expertise, and now addresses reliability issues in a much broader scope."

Liening gets specific about the many benefits his company has realized. "Dow has used MTI to further its technology plans, mostly in the materials engineering area, but also in other disciplines such as piping, pressure vessels, instrumentation and mechanical integrity. MTI's projects contribute to our development of global engineering standards and help us to recognize improvement opportunities."

"We have also found MTI valuable for providing the tools to effectively transfer knowledge from specialists to our manufacturing people in the plants, particularly about inspection and corrosion issues. MTI is also an excellent resource for training our most highly-developed specialists because it gives them a forum where they can exchange ideas and expertise with their counterparts from other companies, including experts from many of the chemical industry's premier suppliers."

Bob Gill, Vice President of Sales for Ellett Industries, fits in the premier supplier category. He is all too happy to help Dow and MTI's other chemical companies. Though he agrees with the others that MTI is a place to find answers to technical questions, he also sees it an opportunity to rub elbows with potential customers. "We as a fabricator have also found it to be useful for sales information," says Gill, adding that fellowship between members helps make MTI the success that it is.

Though all mention, in one way or another, that networking and knowledge sharing alone make MTI a worthy investment, members like Liening still see room for improvement. The Dow engineer and longtime member says that he would like to see even more involvement by companies, particularly in identifying project opportunities. "There is a huge opportunity there for people who see the strategic advantage to their companies," he observes. Coming from one whose company has experienced these advantages firsthand, it's advice worth considering.

MTI Member Spotlight — Outokumpu

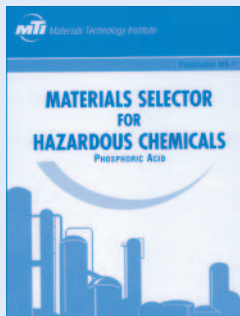
Outokumpu is a dynamic metals and technology group with a clear target of becoming the number one in stainless steel. Customers in a wide range of industries – from oil and gas, refining and chemical, to building and construction, transportation, industrial machinery and equipment, as well as electronics and communication – use our metal products, technology and services worldwide. We help our customers to gain competitive advantage – the Outokumpu factor – by enhancing their performance.

Operating in more than 40 countries and employing some 19 000 people, Outokumpu's annual net sales exceed six billion euros, of which more than 90 percent is generated

outside Finland. The Group's headquarters is located in Espoo, Finland. The parent company, Outokumpu Oyj, has been listed on the Helsinki stock exchange since 1988.

The North American Division, Outokumpu Stainless, Inc., has local production facilities in New Castle, Indiana; Richburg, South Carolina; and Wildwood, Florida, and is a complete supplier of stainless steel products – offering plate, coil, sheet, KBR 72" wide sheet, bar, wire rod, tubular and welding products. Outokumpu's Web site is www.outokumpu.com/stainless/NAD.

Elisabeth Torsner is the representative for Outokumpu.



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Champions at MTI

At the June meeting in Kansas City, MO, MTI celebrated the dedication of our Project Champions with a breakfast in their honor.

Champion	Project / Project Development Committee
John Aller / Capstone	Statistical Analysis of NDE Data (153-03)
John Banker / DMC Clad Metal	Welding of Clad Titanium Plate (158-03)
Juan Bustillos / Dow	Guide for Design, Manufacture, Installation & Operation of FRP Flanges & Gaskets - Phase I (160-04) and Phase II (md)
Gary Coates / Nickel Institute	SS/Nickel Alloy Seminar (lo)
Jim Crum / Special Metals	MS-8 Organic Solvents (lw)
Piet de Later / Dow	Fugitive Emissions (lz)
Brian Fitzgerald / ExxonMobil	Advanced Intermetallics & Alloy for Ethylene Crackers (137-00) Valve Casting Specification (lx); New Materials PDC
Gary Grubert / Gasket Resources	Building & Marketing Flange Makeup Kit & Training Program (161-04) Tank Car Bolted Joint Integrity (lj)
John Harnly / ExxonMobil	Integrity & Condition Assessment PDC
Dale Heffner / Electro Chemical	Rewrite of MERL Permeation Testing Guide (145-01) User's Guide for Evaluating New High Tech Polymeric Materials (159-04) Guide of Repair & Modification of Polymer Equipment (lb)
Bill Watkins / Air Products	Atlas of Microstructures (162-04)
Jeff Jones / ExxonMobil	Chemical Industry Corrosion Mgt. (CICM) - ASSET II (150-02)
Stan Kirsch / ATI - Wah Chang	Reactive Metals Seminar (kv)
Gene Liening / Dow	Materials Training Videos (164-05) Gaining Acceptance of ASTM Materials in the PED (lv)
Bert Moniz / DuPont	Reliability Manual (155-03) Condition Assessment Workshop (163-04) MRB Vendor Audit Procedures (ma) Knowledge Management PDC
Tim Murnane / Rohm & Haas	Reliability Manual (155-03)
Ed Naylor / Akzo Nobel	Transport Containers (kr) Asset Security (lt) Incident Assessment (mb)
Michael Renner / Bayer	How to Implement Risk-Based Inspection (152-02) Rouging (kw)
Randy Scheel / ATI-Wah Chang	Modernization of ASTM Specifications for Unalloyed Titanium (151-02)
Robert Sinko / Eastman	Tank Car Bolted Joint Integrity (lj) Fluoropolymer Training Session (kt)
Robert Smallwood / DNV	Post Construction Repairs (kh)
Rick Sutherlin / ATI - Wah Chang	Reactive Metals Seminar (kv)
Michael Turner / Akzo Nobel	Prediction of Materials Degradation PDC
John Warinsky / 3M	Repair & Damage Assessment of Glass Lined Equipment (mc)
Hardin Wells / Albemarle	Fixed Asset Life for CPI Equipment (lk)
Gary Whittaker / Eastman	Corrosion Monitoring System (135-00) Cross-Cutting Themes PDC



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Upcoming Events

MEETING

DATES

LOCATION

2005

MTI PT Meetings	OCT 25	Westin Hotel
MTI TAC & Annual Meeting	OCT 26	Pittsburgh PA
MTI BOD	OCT 27	

2006

MTI PT Meetings	FEB 20	Wyndham Hotel
MTI TAC	FEB 21	Orlando FL
MTI BOD	FEB 22	

MTI PT Meetings	JUN 6	Millennium Hotel
MTI TAC	JUN 7	St. Louis MO
MTI BOD	JUN 8	

MTI PT Meetings	OCT 24	Dallas-Addison Marriott
MTI TAC & Annual Meeting	OCT 25	Quorum by the Galleria
MTI BOD	OCT 26	Dallas TX

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