

SPEAKER Continued from page 1

TOPIC: Thermal Spray Processes and Coating

Thermal spray coatings offer industry the opportunity to improve the performance and lower the costs of both manufacturing equipment and processes as well as the products produced.

The major advantages of the thermal spray processes include the ability to produce coatings of an extremely wide variety of materials (including ceramics, metals, cermets, and some polymers), deposit those materials without significantly heating the substrate and thus without changing the dimensions or properties of the component being coated, and the ability in most cases to strip a worn coating and

replace it with a new one. The major disadvantage is line-of-sight nature of the deposition. This presentation will provide an introduction to the modern thermal spray processes including plasma spray, high velocity oxy-fuel, and detonation gun deposition. It will also provide a description of the properties of the coatings and compare their wear, corrosion, and thermal barrier characteristics with other materials such as chrome plate and solid sintered carbides. A number of applications will be used to illustrate the use of the coatings.

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Thursday, January 15, 2004

National Officer's Night

Spouses and guests are invited and welcome. Williamson Restaurant, Easton Road, Horsham, PA

Executive and Operating Committee Notice

Schedule for January 15, 2004	
1:30 pm	E & O Reception for Dr. Tucker
2:00pm	Lunch
2:30pm	E & O meeting with brief presentations by Officers and Committee Chairs
6:00pm	Chapter Social Hour
7:00pm	Chapter Dinner & Meeting



Speaker:
Dr. Robert C. Tucker, Jr., FASM
ASM International 2003-2004 President
Topic:
Thermal Spray Processes and Coatings

Dr. Tucker received his BS in Chemistry/mathematics from North Dakota State University and his MS and Ph.D. in metallurgy with minors in ceramics and nuclear science from Iowa State University. He retired from Praxair Surface Technologies as Corporate Fellow and Director of Business Development. He was responsible for business development and strategic R&D programs in the World Wide Coatings Service Business of Praxair. During his tenure with Praxair he had been responsible for the management of materials R&D including programs to develop materials resistant to high- and low-temperature wear, corrosion, high-temperature oxidation and sulfidation, thermal barriers, and composite materials. This work utilized thermal spray (plasma, high velocity oxy-fuel, and detonation gun), physical vapor deposition, and chemical vapor deposition technologies.

Dr. Tucker is currently a consultant, primarily in the areas of surface science and engineering, new technology assessment, and business develop-

ment. He has been an Adjunct Professor at the University of Illinois - Urbana/Champaign and is an Adjunct Professor at North Dakota State University. He is a Fellow of ASM International and a member of AVS, ACerS, AIME - TMS, AChemS, ASTM, NACE, WRC, and Sigma Xi. Currently he is a member of the Executive Committee of the Advanced Surface Engineering Division of the American Vacuum Society. He has been involved in the International Conference on Metallurgical Coatings and Thin Films since its inception and has been the Program Chair, General Chair, Session Chair and continues as a Symposium Co-Chair. He is a member of the Board of Trustees of ASM International, the Past President and a member of the Board of the ASM Thermal Spray Society. He has presented and/or published over 150 papers and has 23 U.S. patents with many foreign derivatives. He is on the editorial board or a reviewer for several journals and other publications.

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Meeting Cancellation Notification

In the event of cancellation of a meeting due to inclement weather, we will broadcast the news as part of KYW News radio's (1060AM) Storm Center Service. ASM cancellations will be specifically announced when KYW airs community cancellations at :20 and :50 past each hour during the afternoon of the day of the meeting. ASM's name will be specifically mentioned, so listen for the name rather than an organization number as is used for schools.

Technical Chairperson

Jim Watters
Delaware Valley Utility Advisors

Meeting Sponsor

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Dinner Menu

- French Onion Soup
- Fresh Garden Salad
- Roasted Top Sirloin of Beef
- Baked Stuffed Potato
- String Beans Almondine
- Chocolate Mousse

Social Hour

6:00 - 7:00 p.m.
Dinner
7:00 p.m.
Price: Members: \$22.00; Retirees: \$15.00; Students: \$10.00




Reservations are necessary - Call: (215) 643-3369 (OH-DE-FOX)
Please don't call if you have already reserved via our web site link at www.asm-philadelphia.com

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For more info about the ASM Liberty Bell Chapter...

Contact Chapter Chairperson Jim Watters
at 215-699-0690 or email: dva2@cs.com.

Do you have news...

that should be shared with the other members of the "Liberty Bell" Chapter? If so, please send your info to Anna Whitehead at her email address:

aj.whitehead@att.net

Be sure to add the phrase "Item to add to the ASM Chapter newsletter" in the subject line. We'll be sure to include it in the next monthly Chapter newsletter.

Changes To Your Membership Information

Any Chapter Member who needs to make a change to their membership listing or to their company affiliation listing must call Membership Service, ASM International at 1-800-336-5152 or use the ASM website at www.asminternational.org. This will permanently update your information.

We depend on ASM International to receive our updated mailing list for this newsletter. So please do not sent information to the return address on this newsletter.



Chairperson's Message

January, 2004

I hope that all of you had a great holiday season. The members of the Executive and Operating Committees look forward to our next meeting on January 15th with our National President, Dr. Robert Tucker. We hope that you will join us. As part of Dr. Tucker's visit the Professional Development Committee is sponsoring a tour of the Materials Engineering labs at Drexel University on Friday morning January 16th at 9:30 am. More information is available in this newsletter.

We had a flurry of activity in November. The high point of the month was the technical presentation by Rick Diekman at the November meeting. Rick is an interesting and colorful character who was a great addition to this year's agenda. His specialty, Cryogenic Processing, has some basis in science but it also is part art and part folklore. I had to cut off a lively discussion as the evening wore on and the questions and comments continued. The meeting also featured a brief presentation by Bernice Steigerwalt regarding a state sponsored program to support employee training.

In addition to our regular meeting, in November we began this year's MEI course, we sponsored a casino trip, and we had a tour of Williamson Trade School. Our MEI course this year is Failure Analysis. It is being taught in 15 sessions at SPS Technologies with 14 separate instructors from ASM and ASNT. On November 15th over 30 of our chapter's members and their guests enjoyed a day in Atlantic City. Then on November 26th our Professional Development Committee sponsored a tour of Williamson Free School of Mechanical Trades. Our host, Carmen Martella and his staff, gave us an outstanding tour of the entire school in addition to the machine shop and metallurgical facility. Williamson started in the late 1800's on a 300 acre site outside of Media PA. The school teaches mechanical trades ranging from bricklaying to horticulture. The school has 250 students from lower income families. The program is a 3 year - in residence program which includes daily chapel and a contract that governs conduct. Attendance is free. The Liberty Bell Chapter is proud to have Williamson's as a Sustaining Member.

We have some excellent speakers lined up for you for our next four meetings, starting with Dr. Tucker on January 15th. Consult your yearbook for additional details, and, of course, read your newsletters when they arrive. We also have our annual Spring Dinner Dance coming up on April 3rd. We look forward to your participation at future Chapter events.

Respectfully submitted,

Jim Watters

Chairperson 2003-04

Tour of Material Science Labs at Drexel University - January 16th at 9:30 am

We will assemble at 9:30 am in the Lobby of the LeBow Center at 31st and Market Street, which is a 2-5 minute walk from the 30th Street Station. If you drive, there are public parking lots on Market St. Lunch will be at Ecco Qui, located at 32nd and Chestnut. Please call Roger Jones at 215-721-1502 or Jim Watters at 215-699-0690 to let us know that you are coming.

Materials Camp for High School Juniors & Seniors

ASM International is sponsoring one week residential Materials Camps for High School Students again this year. One camp session will take place in Toronto, Canada July 4-11, 2004. The second session will take place at Materials Park, Ohio August 9-15, 2004.

A significant change to the program this year is that each selected High School Student will be responsible for transportation costs to and from the camp site.

Students are provided with free lodgings, meals and entertainment plus an exposure to applied mathematics, physics and chemistry reinforced by a hands-on learning experience. Students that will be entering their Junior or Senior year in the fall of 2004, in good academic standing, and an interest in the sciences are ideal candidates for the Materials Camp.

Applications may be downloaded from the internet at: www.asminternational.org/foundation. Applications are expected to be received by ASM International NLT January 31, 2004. Herb Lewis can provide guidance if it is needed. He can be reached by telephone at (609) 984-6672 or by e-mail at: hlewis@deptcor.state.nj.us.

ASM Scholarship Applications

In the academic year of 2003-2004, the Philadelphia Liberty Bell Chapter will provide three scholarships (\$1500.00 each) to college engineering students who intend to pursue a career in Materials Science. All eligible students are encouraged to apply. One full-page essay (single spaced, Arial font, with font size between 10 to 12), stating his/her commitment to the Materials Science profession, will be required. Please contact Dr. Kei-Peng Jen at Villanova University for the application form and details (e-mail: kei-peng.jen@villanova.edu). The deadline for application is March 1, 2004.



C.F. Burns Poster Contest

The Liberty Bell Chapter will be holding its 3rd annual poster contest during our Sustaining Members Night, 4/15/04. This will be the first year the contest is sponsored by Solar Atmospheres. Prize money will be \$500 for 1st Place, \$300 for 2nd and \$200 for 3rd. Due to limited space, we are asking for students to pre-register this year. Space will be awarded on a first come, first served basis. Please register your name and poster title with Scott Nyce (email dsn@solaratm.com). Good Luck to everyone!

Liberty Bell Chapter Spring Dance

Plans are moving forward for the Spring Dinner Dance in early April. This annual event is always the highlight of our social program for the year. It is an evening of wonderful food and beverages with dancing until late into the evening. Be sure to pencil in April 3rd on your calendar. More information will follow in the February newsletter.

Welcome New Members

Sam Awad	Crest Ultrasonics
Wendy E. Croft	Exelon Power Labs
Theodore Davis	Delta Precision Alloys
Deborah DeMania	General Electric Aircraft Eng.
John Disegi	Synthes (USA)
Alan Fabrizzewski	Air Products & Chemicals
Chuck Faulkner	Houghton International Inc.
Ron Hawes	UTI Corp.
Lawrence Klebes	No company affiliation
Jason Knechel	No company affiliation
Gregory Lewicki	L & L Specialty Furnace Co.
Scott McMahon	McMahons
Ronald Petkie	Power and Energy Inc.
Mark Piper	Admedes Schuseler GmbH
Al Prisco	Rohm & Haas
Paul Schmele	No company affiliation
Thomas Schultz	L & L Specialty Furnace Co.
Kyle Shaw	Drexel University
R. Burke Steenhoff, Jr.	Struers Inc.
Steven Zwyczyk	Drexel University
Chris Toto	Greene Tweed & Co.
David Vincent	Johnson Matthey
Mike Walsh	Ugine Stainless & Alloys, Inc.
Alan Weaver	R and B Inc.

In Memoriam

Forrest S. Williams, FASM, died on October 30 of this year. Mr. Williams was a life member of ASM International and a long time active member of the Philadelphia chapter. He held many different offices in the chapter. In 1968 he was elected vice chairman and became acting chairman in 1969 due to incapacitation of the chairman. He was chairman for the 1969-1970 chapter year.

"Woody" Williams received his undergraduate degree from the University of Illinois and his masters degree from the University of Pennsylvania. He served for many years as the head of the Metallurgical Division of the Aero Materials Laboratory, Naval Air Engineering Center, located in the Philadelphia Navy Yard. He continued in that position when the laboratory became part of the Naval Air Development Center. Shortly after the laboratory moved to Warminster, Pennsylvania, he became the head of the Aero Materials Division and continued in that position until he retired in 1980. After retiring he continued his professional career as a forensic consultant.

Woody will be remembered and missed by all.

Upcoming Events...

1-15-04	Thursday	National Officers Night - Thermal Spray Processes and Coating <i>Speaker: Dr. Robert C. Tucker, Jr., FASM - Williamson Restaurant, Horsham, PA</i>	6:00 pm
1-16-04	Friday	Tour of Material Science Labs at Drexel University <i>Meet at 31st St. & Market to begin tour.</i>	9:30 am
2-19-04	Thursday	Eisenman Award Night - From Metals to Materials: The Evolution of a Discipline <i>Speaker: Alan Lawley - Williamson Restaurant, Horsham, PA</i>	6:00 pm
3-18-04	Thursday	Albert Sauveur Night - Development of High Performance Steels for Bridges <i>Speaker: Charles McMahon - Williamson Restaurant, Horsham, PA</i>	6:00 pm
4-3-04	Saturday	Spring Dance <i>Details to follow in February newsletter</i>	
4-15-04	Thursday	Sustaining Member Night - World Trade Center Building Performance Study <i>Speaker: John W. Fisher - Williamson Restaurant, Horsham, PA</i>	6:00 pm