



Philadelphia Liberty Bell Chapter Newsletter

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Thursday, March 19, 2009

Albert Sauveur Award Night

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



Speaker:

FREDERICK E. SCHMIDT, JR., P.E., PH.D., CEF, FASM

TOPIC: MicroStructure and MicroAnalysis of the Historic Phoenix Column Structural Irons

ASM International recently presented an historic landmark award to The

Phoenix Iron Works, Phoenixville, PA. Dr. Schmidt was the Trustee presenter to the Schuylkill River Heritage Center. The Sauveur presentation will discuss a colorful metallography investigation of the macro and micro structure of these early wrought irons and some of their structure property relationships.

The principal accomplishment was the wide use of a rolled structural segment, actually a flange shape. These contoured flanges were configured in 4, 6, 8 and 10 section columns in various lengths exceeding 20 feet long. A rivet flange design, fastened on each side of the flanged shape allowed construction, by upsetting the rivets to form a **solid** flanged/riveted column.

These were used to assemble bridges and structural columns for modern buildings of the period 1850 to 1890. The segments which were examined, tested and analyzed as the subject flange was cast and rolled in 1863 according to the roll marker. It is comprised of Alpha iron and an assortment of oxides, sulfides and silicate inclusions. The average Phosphorus content was .36 % by weight. However, macro segregation shows some regions with channels of Phosphorus as high as 4 %.

Nomarski's phase contrast and special color etching techniques were used to enhance the microstructure analyses. In conclusion the value of these techniques is shown as a tribute to Albert Sauveur in the interpretation of these highly mechanically fibered historic wrought irons.

Frederick E. Schmidt, Jr. began his training as a metallurgist at Drexel Institute of Technology in 1963. In retrospect it was the Drexel co-op program that led him to graduate school after completing his B.S. in Metallurgy and Army commission in 1968. He was ordered to accept an INCRA Fellowship to investigate advanced formability concepts for ordnance applications which culminated in his M.S. at Drexel University in 1970. He earned his Professional Engineering license in 1981. It was in 1994, after proving his M-K theory at the Lake City Army Arsenal, that Drexel awarded him a PhD in Materials Science & Engineering.

Fred retired from du Pont's Experimental Station in 1996 after 24 years as a distinguished Research Fellow. His forte during those years was problem solving the "mission impossibles" in both process & materials performance. These involved CPI, electronics, bio-materials and Remington Arms applications. In 1997 he was appointed Director of Materials Engineering at Packer Engineering in Chicago, and 1998 joined the national firm, Engineering Systems as Technical Director - Materials Engineering. This has launched a challenging second career as a Forensic Professional Engineer.

Fred is currently known as Mur Doc in ASM International circles. ASM has been his professional family since 1963. As they have traveled the globe, Phyllis & Fred have benefited by the technology exchange & numerous friends meeting annually at various ASM conferences. ASM has recognized his many service contributions: Allan Ray Putnam, national award 1991; meritorious MEI adjunct faculty 2001; ASM Fellow 2002; ASM Trustee 2004-7; Trustee ASM Education Foundation 2007-10; and Alpha Sigma Mu honorary materials fraternity Trustee 2007-10. Dr. Schmidt is currently practicing his life long hobby of advanced metallography and structure property performance as it relates to the design of modern and historic products. He is a distinguished author and speaker who is known for his practical demonstrations and computer animations to explain materials design concepts to laypeople. He is active on the board of the International Metallography affiliate Society of ASM, and is IMS - PPM, Program Planning Manager, for the upcoming Microscopy & MicroAnalysis Society conference, Richmond, VA. 2009.

Technical Chairperson
Roger Dougherty, PH.D.
Drexel University (Ret.)

Meeting Sponsors
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Dinner Menu
Caesar Salad
Veal Parmesan
Penne Pasta with Marinara Sauce
String Beans
Sweetheart Sundae

Social Hour: 6:00 - 7:00 p.m.
Dinner: 7:00 p.m.
Prices: Members & Guests: \$28.00; Retirees: \$19.00; Students: \$16.00

Meeting Registration:
Register to attend our meeting on our web site www.asm-philadelphia.com. If you have a large group attending or do not have access to the web site, please contact Don Jordan at 215-721-1502 ext 206 to register.

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Best Wishes to the Philadelphia Chapter

Chairperson's Message

March, 2009



Spring is just around the corner as we long to hear the crack of a baseball bat or perfecting our golf swing to birdie those long par five's on the golf course.

Last month, Bob Hilty from Tyco Electronics offered a presentation on "Tin Whiskers in Electronic Components." Bob's free flowing delivery of this topic captured the interest of everyone. The presentation cited Tin Whisker examples on circuit boards to the space shuttle and their detrimental effects leading toward short circuits.

This month features our Albert Sauveur Award Recipient, Frederick E. Schmidt, presenting "Microstructure and Microanalysis of the Historic Phoenix Column Structural Irons Circa 1863."

Moving forward to November 19, 2009, we host Young Members Night at Drexel University. Sarah Mansuetti and her team are wrapping up the details for this event and promise to retain a very compelling speaker. Mark your calendars!

Respectfully submitted,
 Tim Steber
 2008-2009 Chairperson

Upcoming Events...

3-19-09	Thursday	Albert Sauveur Award Night Topic: MicroStructure and Micro Analysis of the Historic Phoenix Column Structural Irons
3-27-09	Friday	Sustaining Members Thank You Luncheon
4-16-09	Thursday	Sustaining Members Night/ Poster Contest Topic: Development of GD Enriched Alloys for Long Storage of Spent Nuclear Fuel
5-8-09	Friday	Limerick Nuclear Power Plant Tour
6-1-09	Monday	Golf Outing
6-22 thru 6-26		Materials Camp 2009 Drexel University

Limerick Nuclear Power Plant Tour - Friday May 8th - 9 AM

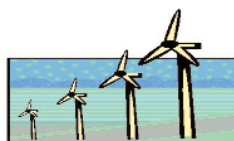
A current and highly publicized subject affecting our nation and peeking our interest is energy. Alternative energy utilization is a hot topic in the materials industry today, but nuclear will always have its place and is sure to expand. As a result, your Professional Development Committee has organized a facilities' tour of the Limerick Nuclear Power Plant located in Limerick Pa. This tour is scheduled to take place on Friday May 8th beginning at 9:00 AM. Due to security and limited tour guides, this tour will be limited to a 20 person maximum. As such, participants will be selected on a first come, first serve basis.

This will be a comprehensive tour lasting about 3.5 hrs. Plan to arrive before 9 AM as the tour will start promptly at 9 AM. More information, including directions, will be sent to the 20 individuals attending. Please contact Trevor Jones at Solar Atmospheres to book your reservation at tmj@solaratm.com or 215-721-1502 x 351. Limerick requires having a list of names at least one week before May 8th, so you must make your reservations with Trevor Jones prior to May 1st.

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Remain a Member - And Get Involved!

Recently, a Chapter committee member was released by his company, and as a result, he wanted to step down from his Chapter role and was reconsidering his ASM membership. This got me thinking about the value of ASM membership, particularly in these economically troubled times.

The benefits of ASM membership really can be considered on two levels. First, the membership itself brings access to information, publications, and data, a significant and unparalleled resource. But the benefits we get from membership, and more important, participation in the local Chapter activities, are at least as important. By participating in Chapter meetings and events, you get to know the people in the area with similar backgrounds, concerns, and opportunities. The informal network of ASM members provides you a ready source when you need information or help.

Let's be blunt -- the ASM network is an excellent way to find a job or an employee. A few examples:

- Several years ago, a local company was looking for a senior person to head its technical support efforts. The successful candidate was found because of his status as an active member of the Philadelphia chapter. In addition, when his spot opened up, the new hire was another member! This position has been filled by four different Chapter members over the years, all found through this network.
- Another member has had three jobs in his post-undergraduate career, the last two acquired through contacts within the Liberty Bell Chapter. One of those jobs was not even advertised when he got it!
- In my own case, every one of the five companies I've worked for has hired me because of personal or professional contacts. No job advertisements were ever generated.

Outplacement firms will point out that the most important thing in getting a new job is networking. Get out there and talk to people face to face works best. It's a matter of time and making the most contacts until you speak to the right person. The many members of our Chapter are a perfect, ready-made resource, and one of them could very well be the right person for you, whether you're hiring or looking for work. These people are working in the same area and the same field.

Though monthly meetings present a good, ongoing networking opportunity, getting involved in Chapter operations is even better. You'll develop deeper relationships with more people, and as important, your name will rise above the general membership. Resumes can tend to look the same, while individuals can stand out. Getting the job offer can hinge upon convincing your contact that you're the easiest person to work with, or the most diligent, or most thorough, or punctual, or whatever else. Not everyone you talk to at an ASM meeting is a decision maker, but often they know people who are, and a good word can get you in front of the right person.

The bottom line is: In addition to the technical resources, ASM is a great way to expand your list of potential references and employers. And, at this time, that's not a bad idea!

To get involved with a committee and expand your network, contact the current Chairman, Tim Steber (tms@solaratm.com) or ask any Chapter member the next time you attend a meeting. And, you are attending the meetings, right?

*John A. Janiszewski,
ASM member since 1969*

Sustaining Member News

The Sustaining Member Thank You Luncheon will be held on Friday, March 27, 2008. Invitations will be mailed to all Company Sustaining Member Representatives.

April 16th, 2008 will be the Sustaining Members Expo! The Expo starts at 5:30 pm. Come and see what your fellow ASM Member Companies have to offer. If your company has a Sustaining Membership with the ASM Liberty Bell Chapter, don't forget to sign up to participate in the Expo.

-If you are not a current ASM Sustaining Member, and want more information on how to become a Sustaining Member with The Liberty Bell Chapter or

- If you are a current Sustaining Member and have questions about upcoming Sustaining Member events:

Contact Sarah Mansuetti -
Email: sarah.mansuetti@rexht.com
Phone: 215.855.1131 x221

Yearbook Advertising Campaign Begins!

The Liberty Bell Chapter advertising committee is putting together the advertisers' list for the 2009-2010 chapter yearbook. ***The Liberty Bell yearbook is seen by over 900 materials professionals and companies in the Delaware Valley and South Jersey.*** And, it has been consistently recognized by ASM International as one of the top chapter publications worldwide. Professionally put together and printed, the Liberty Bell yearbook provides a focused method of getting your company's products and services in front of the people who use them!

If you would like to reserve space or for more information including ad options and rates, please email the Advertising Committee at apollodgns@aol.com.

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

Contact Chapter Chairperson Tim Steber at 215-721-1502 x 216 or email him at tms@solaratm.com.

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 ASMI website at www.asminternational.org. This will permanently update your information. We depend on ASM International to receive our updated e-mail list for this e-newsletter and company membership listing for the upcoming 2009-2010 yearbook.

Do you have news...

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

dvua@verizon.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.

Materials Camp 2009

Our 5th annual Materials Camp will be held at Drexel University June 22 through 26. The Camp is available for high school students who will be entering their Senior, Junior, or Sophomore year in the Fall of 2009. It is a wonderful experience for anyone considering Materials Science or Engineering for a career. Information and applications can be found on the Chapter web site. Last year we had 60 applicants for 24 spots. I urge anyone interested to apply early. We need the support of local companies and individuals to fund this very worthwhile program. If you have any questions regarding application, or providing financial support, please contact Tom Reid, Materials Camp Chairperson by email at ReiTmRd@aol.com, or by phone at 215-378-5997.

C.F. Burns Memorial Poster Contest

The Liberty Bell Chapter will be holding its 8th annual poster contest for graduate students during our Sustaining Members Night on April 16, 2009. This will be the 5th year the contest is sponsored by Solar Atmospheres, Inc. Prize money will be \$500 for 1st Place, \$300 for 2nd Place and \$200 for 3rd Place. Due to limited space, we are asking students to pre-register. Space will be awarded on a first come, first serve basis. Please register your name and poster title with Mike Moyer at mikem@solaratm.com or call him at 215-721-1502 x207. Good luck to everyone!

Help the Chapter -- and Delaware Valley Science Fair

On April 1, 2009, judging will occur for the Delaware Valley Science Fairs. The DVSF is an annual competition for middle and high school students from eastern Pennsylvania, Delaware, and southern New Jersey. For the past several years, members of the Liberty Bell chapter have assisted with judging the Delaware Valley Science Fairs.

But, more judges are always welcome. The judges are all volunteers and come from a variety of technical areas, including industry, education, and research. Although there is not a specific materials category, your materials background qualifies you for a variety of areas. Chapter members have judged categories including physics, engineering, and environmental science.

Recently, chapter member judging have also been distributing applications to Materials Camp to students in their sophomore and junior years; this has been quite effective in finding Materials Camp participants.

So, in addition to helping the DVSF, you could help the chapter further its educational goals by being a judge. This year's fair will be held at the Greater Philadelphia Expo Center in Oaks, PA. If you are interested in being a judge, you can sign up at <http://www.drexel.edu/dvsf>. If you need more information about judging, or some encouragement, talk to John Janiszewski (jjaniszewski@ltk.com or 215.641.8849).

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Mission Statement - ASM International, Philadelphia "Liberty Bell" Chapter

The Philadelphia "Liberty Bell" Chapter of ASM International supports the development and continuance of the materials industry in the Philadelphia area. Chapter activities strive to inform the local technical community of new developments in materials, raise the visibility of the materials industry, provide educational opportunities in materials technology, recruit new people and organizations into materials-related activities, and provide networking opportunities for members of the materials community. The Chapter works with ASM International to use our joint resources to accomplish this mission.