

ASM International  
Philadelphia "Liberty Bell" Chapter

# Newsletter



www.asm-philadelphia.com

Thursday, September 18, 2003

## Opening Night

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



**Speaker:**

DR. CLIFFORD A. WOODBURY, 3rd, P.E.  
LTK Engineering Services

**Topic:**

Innovative Uses of Materials in Passenger Railcar Construction

Dr. Cliff Woodbury is the Mechanical Engineering Manager at LTK Engineering Services in Ambler, PA. LTK is a leading consultant in passenger rail car engineering and design for the North American market. A veteran of three decades in the transit/railroad industry, Dr. Woodbury is a nationally-recognized expert in the area of rail car body and truck structures and dynamics. Currently, Dr. Woodbury is also serving as the project manager for the construction of vehicles for the new Houston light rail transit system.

Dr. Woodbury serves as a Staff Advisor for APTA PRESS on the Construction/Structural subcommittee responsible for the preparation of standards and recommended practices. He also assisted in finalizing the crashworthiness requirements with the FRA for Amtrak's Acela trainsets.

Dr. Woodbury has experience in providing car body and truck design and analysis, vehicle dynamics, noise and vibration control, and mechanical equipment and controls, including air comfort systems. Dr. Woodbury also has provided specifications, design, stress analysis, and expert testimony in connection with construction claims.

Dr. Woodbury received his Ph.D. in Mechanical Engineering from the University of Massachusetts in 1972, his M.S. in Mechanical Engineering from the University of Pennsylvania in 1967, and his B.S. in Mechanical Engineering from Swarthmore College in 1966. He holds professional engineer registration in Pennsylvania, Connecticut, Florida, Georgia, Massachusetts, Maine, New Jersey, New York, Ohio and Texas.

***Innovative Uses of Materials in Passenger Railcar Construction***

The last major innovation in materials for passenger railcars occurred about 1930 when The Budd Company in Red Lion, Pennsylvania pioneered the use of durable, high-strength stainless steel in railroad car bodies. Budd achieved light weight without sacrificing serviceability or crashworthiness by using its material of choice throughout the car body for framing and sheathing, with the exception that the outer extremities of the underframe (end underframe units) were fashioned from high strength, low alloy carbon steel.

*(continued on page 4)*

**Technical Chairperson**

Chuck Bates  
LTK Engineering Services

**Meeting Sponsor**

Laboratory Testing, Inc.  
Solar Atmospheres, Inc.

**Dinner Menu**

Soup du Jour  
Fresh Garden Salad  
Veal Parmesan with Side of Spaghetti  
Peas with Mushrooms  
Chocolate Parfait

**Social Hour**

6:00 - 7:00 p.m.

**Dinner**

7:00 p.m.

Price: Members: \$22.00

Retirees: \$15.00

Student: \$10.00

*We regret having to increase the cost for dinner this year. Williamson increased our prices again, and our Board did not feel we could absorb the additional cost. The Chapter continues to subsidize dinners for all attendees to varying degrees.*



**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](http://www.asm-philadelphia.com)

## ASM Philadelphia Sustaining Members (2003-2004)

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Donovan Heat Treating Company

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EMSL Analytical Inc.  
Exelon PowerLabs  
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LTK Engineering Services

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Rex Heat Treat  
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Solar Atmospheres, Inc.  
SPS Technologies, Inc.  
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Robert Wooler Company

**Institutional Members**

Drexel University  
Temple University  
University of Pennsylvania  
Villanova University  
William Tennent High School  
Williamson Trade School

## Chapter Officers 84th Year

Jim Watters, Chairperson  
Delaware Valley Utility Advisors

Scott Nyce, Vice Chairperson  
Solar Atmospheres, Inc.

Travis Nelson, Secretary  
Materials Resources International

Joel Muzik, Treasurer  
Ramball Test Laboratories

Robert DeKalb, Executive Secretary  
Robert Wooler Co.

Fred Klock, Exec. Treasurer  
SPS Technologies

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

Contact Chapter Chairperson Jim Watters  
at 215-699-0690 or email:  
dvua2@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](mailto:aj.whitehead@att.net)

Be sure to add the phrase "Item to add to  
the ASM Chapter newsletter" in the sub-  
ject 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](http://www.asminternational.org). This will per-  
manently update your information.

We depend on ASM International to  
receive our updated mailing list for this  
newsletter. So please do not send infor-  
mation to the return address on this  
newsletter.



## Chairperson's Message

September, 2003

Wow. Do we have a great lineup for you this year. We start off this month with Cliff Woodbury from LTK speaking about Rail Car Engineering. We end up in April with a discussion of the World Trade Center disaster by a man who analyzed the structural issues for the Federal Emergency Management Agency. In between we have talks on The Liberty Bell, Cryogenic Processing, and High Performance Steel for Bridges. We have a talk by our own Alan Lawley on the Evolution of Materials Engineering. And we have our usual visit by our National Chairperson who will speak on Thermal Spray Processes. I would like to express my personal thanks and the thanks of our Chapter to our Chairperson from two years ago, John Janiszewski, who put all of this together.

I would also like to express my thanks and the thanks of the Chapter to last year's Chairperson, Don Jordan, for the outstanding job he did. We had an innovative line up of speakers and some outstanding educational and social programs. Our Chapter brought home the ASMI Five Star Award again. Also, the E&O member duties and responsibilities calendar developed under Don's leadership should help us to run more effectively in the future.

In addition to our usual series of programs this year we have started planning for a golf outing, a dinner dance, and a full schedule of education programs and plant visits. Before we break in December we will begin our MEI course for this year, which is on Failure Analysis. We have scheduled an educational seminar on State Sponsored Training you can obtain for your employees and co-workers. See the notices in this issue for dates and details on these two programs. Thanks to Fred Klock, Bob Rich, and Roger Jones for getting these programs going.

We are hoping to move some of our communication to the web this year. We plan to give you the option to receive your newsletter and various other notices by e-mail or by hard copy. We are doing this in an effort to reduce costs in the future and also to improve communication. We plan to poll the attendees at the September meeting to get some feedback before making any changes.

Your Executive and Operating Committee looks forward to seeing you at our meetings and functions throughout the coming year. I am pleased to see some new members on our E&O Committee this year, and I am also pleased that we have a total of four representatives from three of our local Universities on our Committee this year. There are still plenty of opportunities if you would like to become involved. Feel free to contact me or any member of our Committee to become more involved or to express your opinion.

It's going to be a great year.

Respectfully submitted,  
Jim Watters  
Chairperson 2003-04

## Philadelphia Chapter Awards Announced at May Meeting 2003

The following awards were announced at the May meeting:

Outstanding Company Support Award. . . . .	<b>A.L. Singmaster Personnel Services</b>
Young Member Award. . . . .	<b>Jonathan Thomas</b>
Metallurgical Engineering Assistant's Award. . . . .	<b>Robert DeKalb</b>
Philadelphia Chapter Distinguished Service Award. . . . .	<b>Fred Klock</b>
Meritorious Service Award. . . . .	<b>Robert Coyle</b>
Delaware Valley Metals Man of the Year. . . . .	<b>Jeff Waldman</b>
President's Award. . . . .	<b>Ed Mazeika</b>

The following two awards will be presented in 2004:

William Hunt Eisenman Award. . . . .	<b>Alan Lawley</b>
Albert Sauveur Lecture Award. . . . .	<b>Alexander D. Wilson</b>

## 2003 Postgraduate Poster Winners

The following three winners were announced at the May meeting:

**First Place** - Saif El Din Khali - Drexel University

*Development of Smart Textiles with Embedded Fiber Optic Chemical Sensors*

**Second Place (Tie)** - Tom Juliano - Drexel University - *Boron Carbide for Armor Applications, Indentation, Ramen and TEM Studies*

**Second Place (Tie)** - Hoa Lam - Drexel University - *Development of Gradient Design Composite Armor*



## 2003 Scholarship Winners

**AW (Doc) Grosvenor Scholarship** - Mark Florentino - Drexel University

**Anthony Gallacio Scholarship** - Aimee Bailey - University of Pennsylvania

**Joseph J. Weisser Memorial Scholarship** - John Chmiola - Drexel University

**Charles F. Burns, Jr. Memorial Scholarship** - Katherine Dykes - University of Pennsylvania



Joseph J. Weisser Memorial Scholarship Winner  
John Chmiola - Drexel University

## Upcoming Events...

9-18-2003	Thursday	<b>Opening Night - Innovative Uses of Materials in Passenger Railcar Construction</b> <i>Speaker: Dr. Clifford Woodbury</i> - Williamson Restaurant, Horsham, PA	6:00 pm
10-16-2003	Thursday	<b>Young Members Night - Radiography of the Liberty Bell</b> <i>Speaker: Vincent F. Roding</i> - Williamson Restaurant, Horsham, PA	6:00 pm
11-11-2003	Wednesday	"Training Your People and Getting Paid For It Seminar, SPS Technologies Jenkintown, PA	8:00 a.m.
11-19-2003	Wednesday	<b>Continuing Education Night - History, Research, Myths &amp; Applications of Cryogenic Processing</b> <i>Speaker: Frederick J. Diekman</i> - Williamson Restaurant, Horsham, PA	6:00 pm
11-25-03	Tuesday	Williamson Trade School Tour, Media PA	TBA

## Training Your People and Getting Paid For It

A seminar that will be taught by De Sales University on November 11, 2003 at SPS Technologies beginning at 8:00 a.m. More details will follow in the October newsletter.

## Williamson Trade School Tour

The Professional Development Committee will be sponsoring a tour of Williamson Trade School in Media Pa. The date of the tour is Tuesday November 25th 2003. More information will follow in the October newsletter. For further information please contact Roger A. Jones at Solar Atmospheres Inc. 215-721-1502 Ext. 201 or by e-mail at raj@solaratm.com.

## Welcome New Members...

- Kenneth J. Bauhof - *Solar Atmospheres, Inc.*
- James M. Nagy - *Solar Atmospheres Mfg., Inc.*
- Bruce A. Ruht - *Solar Atmospheres Mfg., Inc.*
- Lloyd Collander - *Collander Engineering*
- Timothy Justice - *Praxair Surface Technology*
- Deborah A. Oakes - *Specialty Resources Inc.*
- Patrick J. O'Brien - *Yarway Corp.*
- George Rawa - *Greene Tweed and Co.*
- Douglass J. Rothermel
- Roger Shupe - *Bid Service*
- Elaine C. Soltani - *Alloy Surfaces Co., Inc.*
- Kurt Zimmerman - *Gusmer Corp.*

## Feel Free To Write

While vacationing in Ocean City, NJ, Chick Matthews had the opportunity to visit with Mill DeMauriac in June.

At age 94, Bill is probably our oldest past Chairman. If you want to send a letter or card to Bill. His address is as follows:

William DeMauriac  
2907 Central Avenue  
Ocean City, NJ 08226

***Innovative Uses of Materials in  
Passenger Railcar Construction***

*(continued from page 1)*

Since then, body structures of passenger rail cars have generally been constructed using carbon steel, stainless steel or aluminum alloys for framing and sheathing, and high strength low alloy carbon steel for the end underframe units.

In the last decade, and the last five years in particular, new requirements for collision protection, reduced weight, and reduced maintenance have led to new materials and new applications in the rail industry. And, the increased prominence of European designs and non-US car suppliers for US railroads and rail transit systems have led to different designs and materials being proposed. Dr. Woodbury has participated in several rail car projects where materials new to the rail industry have been used, including Amtrak's high speed Acela, San Juan Tren Urbano, and the Houston light rail vehicles. Dr. Woodbury will discuss the genesis of these new material requirements and applications, and of the new uses for existing materials, and where further development is needed.

**Advertisers in the 2003-2004  
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