October, 2015

This Issue:

2. Next Meeting: (Thursday) October 29, 2015
Speaker: Mr. Jon L. Tirpak, P.E., FASM
V.P. ASM International

Meeting Location:
Meson Madrid, Palisades Park, NJ
www.mesonmadrid.com

3. 2015 Teachers Materials Camp
October Speaker Bio
Mr. Jon L. Tirpak, P.E., FASM

4. Coming Events
Meeting Directions

Chair’s Message

We offer greetings from the ASM Metro NY-NJ Chapter. I hope our audience had a wonderful summer and coped well with the increased volume of traffic and late summer “dog days”. At this point, we’ve already had our first meeting to hear future material scientists discuss their work.

This summer, Prof. Roumiana S. Petrova of NJIT chaired one of the largest Summer Materials Camps with the assistance of ASM International, the Metro NY-NJ Chapter and NJ Institute of Technology. More than 30 teachers attended. We all offer Dr. Roumiana a warm THANK YOU for her ongoing dedication. She has done an amazing job over the years. Some information about the Materials Camp appears on page Additional info will be presented next month. We are now looking for sponsors to continue this activity. If your company would like to participate, please contact Dr. Petrova at:

Mr. Jon Tirpak, the current Vice-President of ASM International and will speak at our October 29 meeting at Meson Madrid. His talk is on Additive Manufacturing vs. Forging and I hope many attend. Forging is one area I am not up to date on, and I see that digital technology is making inroads. I wonder what this means for many older technology based companies.

On an aside, I am off to give a talk at the Smithsonian American Art Museum within their Conservation Research Labs. One may ask, what a metallurgist would have to do with this topic. The answer may be not much, but as material scientists, we have a broad educational and experience based background over many materials and fields. Though the audience will include chemists and art conservators, they struggle to clean the historical artifacts and this is where my experience meets their interest. This is where our broad experience in materials comes into play, plus the work I do in surface cleaning. I feel our membership have the skills and experience that cross many fields and I am lucky enough to get to do this. I think many more can assist museums in many ways.

Best wishes and I hope for rain and cooler weather soon

Dr. Robert Sherman, Applied Surface Technologies
Chairman, ASM Metro NY-NJ Chapter
roberts@co2clean.com
Additive Manufacturing vs. Forging

Mr. Jon Tirpak, P.E., FASM., V.P. ASM International
Senior Program Manager, SCRA Applied R&D
Advanced Materials Division

Is direct digital manufacturing a threat to forging? That is the question this presentation will explore.

Over the past decade, many direct digital manufacturing or additive manufacturing technologies have been investigated with some being technically and commercially viable to make a shape. This presentation will identify the known current direct digital manufacturing technologies with compete with forging part manufacture and forging die manufacture.

The presentation will identify the activities surrounding this technical community. For instance, the ASTM F-42 Committee was recently formed to standardize additive manufacturing technology with its first standard, ASTM F27922-10. Several Additive Manufacturing (M) technologies are available to produce metal parts. Whether or not these parts will compete with forgings remains to be seen. As fit-check prototypes, perhaps yes; as fatigue resistant, fracture tolerant parts, perhaps no.

It is advised that the forging industry continue to monitor AM sector to keep pace with these evolutionary or even revolutionary advances.

Recommendations will be suggested to keep pace with these new technologies which could both benefit or cost the forging industry, depending upon one’s perspective.

Mr. Tirpak’s bio appears on page 3
2015 Teachers Materials Camp at NJIT

Through the overwhelming demand by area teachers, the efforts of Dr. Roumiana Petrova, and the support of New Jersey Institute of Technology, the ASM Materials Education Foundation, and the Metro NY-NJ Chapter, a very successful Teachers Materials Camp was held June 22-26, 2015.

Numerous volunteers generously contributed to the event, far too many to list here, but we would like to especially acknowledge and thank the following people:

From NJIT:
Prof. Edgardo Farinas
Chair Chemistry Department
Sylvana Brito
Chemistry Department
Zunjian Yang, Student

Master Teachers:
Robert Wesołowski
St. Joseph H.S., PA
Brian Wright
Olympia H.S., WA

From ASM International:
Pergetina (Jeane) Deatherage
Administrator Foundation Programs

From the ASM Metro NY-NJ Chapter:
Dr. Robert Sherman, Chairman
Applied Surface Technologies
Dr. Richard Lynch, Lunch & Associates
Herb Goldenberg, AEIS
Pierre Taubenblat, Promet Associates
Alfred Snowman, Retired Praxair

Very Special Thanks also to Dr. Roumiana Petrova, NJIT for once again serving as Materials Camp Chair.

More information and Materials Camp photos will appear in the next issue

October Speaker bio

Mr. Jon Tirpak, P.E., FASM, V.P. ASM International

Mr. Jon Tirpak is currently Senior Program Manager for the SCRA Applied R&D Advanced Materials Division in Charleston, South Carolina. He is responsible for investigating, developing and implementing processes and technologies within the nation’s foundry and forging industries, to reduce lead times and costs and to improve quality of complex metal shapes. He is the Executive Director of the Forging Industry Association — Department of Defense Manufacturing Consortium and Program Manager of the Defense Logistics Agency’s FAST Program.

Mr. Tirpak earned his BS in Metallurgical Engineering at Lafayette College in Easton, PA and his MS in Materials Engineering at the University of Dayton in Dayton, OH.

He was commissioned by the US Air Force in 1982 as a 2nd Lieutenant, working on structural failure analysis on various systems while serving at the Air Force Materials Laboratory. His second tour within the Ballistic Missile Office involved (Continued on page 4)

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Jon Tirpak Bio (Cont. from page 3)

integrating the Air Force’s nuclear testing requirements which involved myriad materials and systems ultimately tested beneath the ground at the Nevada Test Site. In 1988, he departed the Air Force as a Captain, trading his blue uniform for green hiking togs to hike the entire Appalachian Trail from Georgia to Maine. After completing the trail and traveling extensively through Europe and the States, he resumed his materials engineering career with a position at Universal Technology Corporation in Dayton, OH, and then to Aeroquip Corporation in Ann Arbor, MI. Ultimately, he landed in Charleston, SC with SCRA Applied R&D leading programs and developing new business for the company. He is a licensed metallurgical engineer in South Carolina and Fellow and past trustee of ASM International. Mr. Tirpak has chaired the New Products and Services Committee and the Federal Affairs Committee in addition to being a member of many other committees throughout the Society culminating in his selection as Vice President in 2014.

October 29th Meeting Directions

Meson Madrid
343 Bergen Boulevard,
Palisades Park, NJ 07650
www.mesonmadrid.com
201-947-1038

Meson Madrid is located about five blocks east of Routes 1/9/46 at the junction of Bergen Blvd (US Hwy 63) and E. Palisades Blvd.

There is a direct link to Google® maps on the Meson Madrid website that will provide you with customized directions from anywhere.

Go to: www.mesonmadrid.com
click on the “Directions” button at left, then look above the map and click on “Directions from anywhere Click Here”