53rd Annual AFS Management Night

ASM-Detroit is pleased to be joining the Detroit-Windsor Chapter of the American Foundry Society for their 53rd Annual Management Night on Thursday, January 24th at Vladimir’s in Farmington Hills. This is an extraordinary meeting with leaders from all sectors of the automotive industry in attendance. The keynote speaker for the evening will be Diana Tremblay, current General Motors Corporation Vice President of North American Manufacturing.

In this role, Diana manages a team of approximately 55,000 employees and has responsibility for 58 facilities in North America. These plants include assembly, stamping, powertrain and component operations which work together to produce some of GM’s most popular vehicles, such as the Chevrolet Volt, Buick Enclave, GMC Sierra and the Cadillac ATS. In 2011, she led the implementation of over $3.6 billion of investment in U.S. manufacturing plants, creating or retaining nearly 10,000 jobs.

Diana was named vice president, Manufacturing and Labor Relations in December 2009. Previously, she served as GM North America Vice President of labor relations beginning in January 2006, where GM negotiated an historic labor agreement. Prior to that, she held various positions in labor relations and manufacturing, including global positions in Luton, England and Antwerp, Belgium. Diana began work with GM at Central Foundry in Defiance, Ohio, in 1977.

Diana holds a bachelor’s degree in industrial administration from Kettering University and, as a Sloan Fellow, received a master’s degree in business management from the Massachusetts Institute of Technology.

Diana has a strong passion for leadership and has been featured in Fast Company’s 30-second MBA series. She has also shared her views on leadership in the Wall Street Journal and Forbes. In 2010, Diana was named one of the “100 leading women in the North American auto industry” by Automotive News. Diana is on the Board of Directors for Focus HOPE and Medical Advantage Group, and she serves on an advisory board for Kettering University. Diana also serves as the executive champion for GM’s African Ancestry Network Affinity Group.

Diana and her husband, Dan, have been married for 31 years. They have one daughter, Lisa, attending college in New Hampshire.

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**Meeting: Thursday, January 24, 2013**

Venue: Vladimir’s
28125 Grand River Ave., Farmington Hills
For reservations contact the AFS Office at: (586) 322-3410 or email to admin@afsdetroit.com before Friday, January 18.

Please identify yourself as ASM member.

5:30 to 9:30 p.m.

Dinner tickets with a reservation are $38; walk-ins are $43 with a $1 discount for cash or check.
Chairman’s Message

Our annual University Night at the University of Michigan was cancelled this year due to very low participation on behalf of the students, which lead us to reconsider how to get our Young Members and other Students interested in ASM and materials in general.

At our recent board meeting, the U of M MMS representative and Young Members/Student Affairs Chairs were in attendance to discuss how we could improve interest and attendance as well as possible alternatives to the traditional poster session. A number of suggestions were made including a student mixer at a local pub, a company or laboratory tour and the possibility of a student lunch on a Friday which would best accommodate class/work schedules.

The month of February was identified as the best timing for students with lighter mid term tests during that time. This opportunity would be in addition to our normal Technical Meetings and we would encourage Detroit Chapter members and Company Representatives to attend; perhaps even opening this meeting to recruiters and/or companies offering internships. Further discussion is required and we welcome members suggestions and comments.

This month we will be joining the Detroit-Windsor American Foundry Society for their 53rd Annual Management Night meeting on January 24th. This year, DW-AFS’s keynote speaker is Diana Tremblay, Vice President of Manufacturing at General Motors Corporation. This meeting is the highlight of AFS’s technical season with outstanding attendance from leaders in the auto industry. We are pleased to have been asked to join this annual event and encourage our membership to attend. Reservations for this event will be handled by AFS via email to admin@afs detroit.com

Applications for student scholarships are now available on the ASM-Detroit website with an extended deadline for submission. Please be sure to download this information for submission or contact our Chapter Administrator at asmdetroitchapter@gmail.com.

I am please to be serving as your Chapter Chairperson and welcome any comments or suggestions you may have to better serve the chapter membership. You may contact me anytime at asmdetroit.chair@gmail.com or through our Chapter Administrator, Caryn Ruzich at asmdetroitchapter@gmail.com.

Hope to see you on January 24th at Vladimir’s.

53rd Annual AFS Management Night
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The evening starts at 5:30 p.m. with a social hour with hors d’oeuvres and will continue with dinner and the speaker! Dinner tickets with reservation are $38; walk-ins are $43 with a $1 discount for cash or checks.

For reservations, contact the Detroit-Windsor AFS Chapter at (586) 322-3410 or via email to admin@afs detroit.com. Please indicate that you are an ASM member when you make reservations. Make plans now to join us and make your reservation today.
Materials Column

Thomas Kozina

Wherever you look around you there is Materials Science – even when you sit down to eat. Take another look at the metal utensils in front of you. Information may be stamped or etched on them. What do those numbers mean, numbers such as “18-8” or “18-10”? What does “stainless” mean? Don’t worry; this essay won’t get too technical.

You don’t get to choose your parents. You also don’t get to choose the cutlery in a cafeteria or restaurant. But perhaps you’d like to buy cutlery for your home? Are the numbers relevant? Keep reading and you will find out. The next time you eat at a restaurant, you may never look at cutlery in the same way again! If your date is boring and you want to send him/her a subliminal message, check for text messages and then examine the cutlery.

“Stainless” is a defined business term used for trade. In America, Europe and a few other countries, stainless steel is defined as that steel having a minimum percentage of 10.5% chromium. But that doesn’t mean it is stainless. Rust resistant would be a better term. 10.5% chromium stainless steel is reasonably rust resistant if washed and dried quickly after getting dirty. It should also not touch other metals of different composition, including different stainless steels in a wet environment. That is why you should separate utensils from each other in a dishwasher.

The two numbers on cutlery, the chromium and nickel percentages, respectively, have a great effect on price and overall appearance. The percentage of chromium contributes the most to corrosion protection. How the corrosion protection works is that chromium is highly reactive and forms a layer similar to chrome when exposed to the oxygen in air. The mechanism is called passivation. Below 10.5%, passivation cannot occur and that is where the “minimum of 10.5% chromium” definition came from. The exact number is not agreed to and varies according to the environment.

The passivation layer is only about 1 to 2 nanometers thick and that is why stainless steel is so shiny. Aluminum and titanium also form passivation layers but their layers are relatively thick so that the surface is dull unless their surfaces are specially treated.

The function of nickel, which has the FCC structure, is to make the stainless steel austenitic, which means it will also have the FCC structure. The nickel structure of FCC is a lot more ductile than the BCC structure of iron. As a side note, austenitic steel is not magnetic, generally, and this fact can be used to easily identify austenite steel.

Better utensils also have varying amounts of molybdenum added. Molybdenum contributes to high temperature resistance and improves the robustness of the passivation layer (less passive film breakdown) so that the utensils do not have a metallic taste, noticeable when cooking salty foods. The molybdenum content is not stamped on the utensil. If you are allergic to nickel, use cutlery with molybdenum in it or with no nickel.

The most common alloy for cutlery used to be 18-8 which means 18% minimum chromium and 8% minimum nickel. It has a very good appearance and the popular alloy 304 (for most suppliers) will continued on next page
Are You a Sustaining Member?

Sustaining Members play a critical role in the success of our chapter. They provide both a continued core presence at Chapter activities, and an increased level of financial support for our chapter.

In return, Sustaining Members enjoy the goodwill and camaraderie, and the satisfaction of helping to educate and promote young material professionals. Sustaining Members also enjoy an array of benefits available only to them:

- Listing on ASM-Detroit’s website and a link to your company website.
- A place in our monthly PowerPoint presentation at our technical meetings highlighting the Detroit Chapter’s Sustaining Member companies.
- Discounted advertising rates in the Micro Examiner and our Yearbook & Buyer’s Guide.
- A company profile in our monthly newsletter, the Micro Examiner, advertising your company’s products and/or services.
- Special recognition in our Yearbook & Buyer’s Guide.
- Recognition at our Sustaining Members Night, including the honor of funding the Sustaining Members Meritorious Scholarship.

The best part is that membership is only $118 more than an individual membership AND it includes one individual membership as well!

Becoming a Sustaining Member can only increase your visibility in the material community. Help your chapter continue our student outreach programs and become a Sustaining Member company.

To become a Sustaining Member, contact ASM International at (800) 336-5152 extension 0 for member services. SUSTAINING MEMBERSHIP HAS ITS PRIVILEGES, CALL TODAY!

Materials Column (continued from page 3)

satisfy the 18-8 requirements and so alloy 304 is used for 18-8. Alloy 304 also electropolishes very well and is the polishing process of choice because mechanical polishing can mostly be eliminated. The high nickel content allows forming to be done in one operation without annealing. Alloy 304 is available in different grades with various carbon and titanium contents and different drawabilities.

Now for the interesting part; you’re sitting in a restaurant and there are no numbers. What is the alloy? If it’s very shiny, it’s probably 18% chromium and has been electropolished. If it’s thick and has deep features, it probably has 8% or more nickel. You could also predict the presence or absence of nickel with a magnet. If it has obvious rust, it will have less than 10.5% chromium and possibly none at all.

More and more, in stores and elsewhere, you’ll be seeing cutlery that is thin, flat and dull, and labeled 18-0. There isn’t enough nickel to allow curvaceous forms without cracking. You’ll also be noticing the absence of any numbers, indicating little or no chromium. You’ll know when the economy recovers, because the cutlery will start to look better, won’t have an after-taste and won’t be attracted to magnets.
Micro-Examiner

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admin@afsdeleto.com before
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ASM-Detroit Chapter 2012-2013
Officers & Executive Committee

Phil Huber........Chair
Susan Hartfield-Wünsch........Vice Chair
Manish Mehta, Ph.D........Secretary
Thomas Mackie.........Treasurer

James Boileau, Ph.D........Attendance/Publicity
Eric McCarty........Education/MEI/Round Table
Thomas Kozina........Awards & Recognition & National Affairs
Jason Coryell........Finance/Council of Fellows
Roger Pryor........Membership/Sustaining Members
J.P. Singh........Papers & Programs
Meghan Oaks........Co-Chair, Young Members/Student Affairs
Kae Trojanowski........Co-Chair, Young Members/Student Affairs
Michael Blazejewski........Entertainment

ASM-Detroit Chapter Office
Caryn Ruzich, Administrator
asmdeleto@gmail.com
www.asminternational.org/portal/site/detroit
(586)573-0700

Calendar of Events

January 24, 2013
53rd Annual AFS Management Night
Diana Tremblay
General Motors Corporation
Vladimir’s, Farmington Hills

February 11, 2013
National Officer’s & Past Chair’s Night
Dr. Gernant Maurer
ASM International President
Vladimir’s, Farmington Hills

March 11, 2013
Educational Seminar – Day
Joint ASM/AFS Meeting – Evening
Vladimir’s, Farmington Hills