



Edmonton Chapter News

Last Month

ASM Student Night Recap Greg Nelson

ASM Edmonton kick-started the 2012-2013 Technical Program with the third annual Student Night held at the University of Alberta Faculty Club. This event was graciously financially sponsored by Acuren, Clemex Technologies Inc., Met Lab Corp., EMI and Qualimet. Door prizes were generously provided by CASTI Publishing Inc. and included the desirable CASTI Red and Black Books for non-ferrous and ferrous materials. Over 70 people attended this meeting, including approximately 55 students from NAIT and the U of A. We were pleased to invite 6 industry members from across Alberta who spoke about their personal experiences with the materials programs at NAIT and the U of A and who gave important advice regarding career development, networking skills, and professionalism. Both students and industry members asked questions and everyone seemed to enjoy the evening's discussions. Special thanks go out to our speakers and volunteers that made this event such a success! Again we would like to thank the evening's sponsors: Acuren, Clemex Technologies Inc., Met Lab Corp., EMI, Qualimet, and CASTI Publishing Inc., whose contributions made the entire event possible!



Tony Lam, former ASM NAIT Student Rep, speaking about his experiences at NAIT and AITF

Sponsors Section

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Sponsors of ASM Student Night

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October Events

Technical Dinner Meeting

For our first technical dinner meeting of the season, we will be welcoming Andrew Garner from Andrew Garner & Associates Inc. for the Brian Ives Lectureship. Andrew will be discussing *Localized Corrosion of Stainless Steel and Carbon Steel Weldments*.

Abstract:

Weld-associated corrosion of stainless steels will be reviewed with examples from oxidizing and reducing environments from the pulp and paper industry. Examples of carbon steel weld corrosion will also be detailed from sea water and from caustic exposure. Pitting, stress corrosion, filler metal composition and post-weld cleaning issues are among the critical factors covered. The range of test methods available to identify the best ways to avoid the corrosion issues will be detailed.

About the speaker:

Andy received his degree in Metallurgy from Liverpool University and completed his Ph. D in Metallurgical Engineering at UBC in 1974. He went on to hold various related research and management roles at Placer Development Inc. and FP Innovations among others before he founded Andrew Garner & Associates Inc. in 2005.

Andrew is the current winner of ASM Internationals Brian Ives Lectureship Award and has a long list of honors in recognition of his achievements from societies such as NACE, TAPPI, and the Conference Board of Canada.

Dates and Times:

Date: Thurs, October 25, 2012
Registration: 6:00 PM
Dinner: 6:30 PM
Technical Program 7:30 PM
Location: University of Alberta Faculty Club

RSVP by October 23, 2012 to asm.edmonton@gmail.com

Costs:

Students: \$10
Professional Members: \$25
Non-Members \$35

Payment can be made by cash or cheque. If you would like to pay by credit card, there will be a nominal fee of \$1.50 to cover processing cost. For more details regarding this payment option please contact us at asm.edmonton@gmail.com.

Sponsors of ASM Student Night and ASM International Edmonton Chapter

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Upcoming Events

2012-2013 Events

Thurs, Oct 25th - Technical Dinner Meeting
Topic: Localized Corrosion of Stainless Steel and Carbon Steel Weldments
Speaker: Andy Garner
Location: U of A Faculty Club

Thurs, Nov 27th – Technical Dinner Meeting
Topic: ASTM A370 Mechanical Testing of Steel Products
Speaker: John Bringas
Location: U of A Faculty Club

Thurs, Jan 24th – Technical Dinner Meeting
Topic: TBA
Speaker: TBA
Location: U of A Faculty Club

Thurs, March 28th – Technical Dinner Meeting
Topic: TBA
Speaker: Hugh Roth
Location: U of A Faculty Club

Thurs, Apr 25th – Technical Dinner Meeting
Topic: TBA
Speaker: TBA
Location: U of A Faculty Club

Thurs, Jun 6th – Annual General Meeting
Location: U of A Faculty Club

Chapter Sustaining Members

Please take a moment to visit the websites of our chapter sustaining members

[Altasteel Ltd.](#)
[Argus Machine Co. Ltd.](#)

Awards and Recognition

John Convey Innovation Award Greg Nelson

ASM Edmonton congratulates Apollo-Clad Laser Cladding for winning the 2012 John Convey Innovation Award. The John Convey Innovation Award was established by ASM Canada Council to recognize companies for their contributions to the Materials Engineering Industry in Canada. The citation reads: “**For the development of new materials and methods for laser cladding advanced oilfield equipment**”.

Excellence in Education

Greg Nelson

ASM Edmonton would like to recognize the recent achievements of one of our executive committee members, Dr. John Nychka. Dr. Nychka has recently been awarded the Engineers Canada Medal of Distinction in Engineering Education. This award recognizes one outstanding Canadian professor each year and considers teaching impact, contributions to education, outreach, and service to students. Dr. Nychka also received the Excellent in Education Award from APEGA in 2011. Dr. Nychka recently did a segment on Daily Planet where he demonstrated the properties of some common materials in fun demos. Such as using an axe made out of silly putty (dipped in liquid nitrogen) to split wood, stretching a heated mechanical pencil tube to demonstrate thermoplastic forming, and melting a copper sheet to demonstrate heat conduction. Dr. Nychka is an associate professor at the University of Alberta in the Department of Chemical and Materials Engineering. Dr. Nychka is involved as the Student Outreach Chair and was the former Chapter Chair of the Bluegrass Chapter.

Trivia

(Courtesy of Greg Nelson)

Oxide scale growth on metals at high-temperatures is often limited by diffusion of oxygen (or metal ions) through the scale. This limitation allows fine control over the generation of protective oxide scales. However, under some circumstances this barrier can be removed. How and under what circumstances does this occur?

Feedback

The ASM Edmonton Executive is continually working to improve this newsletter in order to better serve our members. If you have any suggestions or comments regarding the newsletter or if you would like anything included please contact us [here](#).

Trivia Answer

The diffusional barrier can be removed if the oxidation process creates a liquid oxide (i.e an oxide with a melting point below the process temperature). This is termed catastrophic oxidation and is marked with a sharp increase in oxidation rate. For example, the formation of MoO_3 (MP 795°C) or V_2O_5 (MP 674°C) is of particular concern for Mo and V containing alloys

Source: Per Kofstad, *High-Temperature Oxidation of Metals*, 1966

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2011-2012 ASM Edmonton Executive

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