



Edmonton Chapter News

February Technical Dinner Meeting Recap

Patrick Lysz
Chapter Chair

On March 27, 2014, William Lenling, an ASM Fellow and President of Thermal Spray Technologies Inc., presented on the "Use of Thermal Spray Coatings in the Oil & Gas Industry". The meeting was held jointly with the local AWS Chapter at the University of Alberta Faculty Club and there were 41 attendees.



ASM Edmonton Chair Patrick Lysz thanking William Lenling.

Bill discussed various different thermal spray techniques such as HVOF, electric arc spray and flame spray, which could be used to apply coatings for our local industry. In addition, he presented the advantages and limitations of thermal spray technology. He showed the results of some of his research and the benefits of refining the process parameters of each application method; in particular, Bill explained the difference between field-applied coatings and similar coatings applied under more controlled lab conditions. Bill shared some research into specific coatings he has experimented with and their performance relative to more traditional methods. The audience was engaged in the topic and asked interesting questions at the end of the presentation.

We would like to thank Bill for travelling to Edmonton to present to the Edmonton materials science community.

The next ASM dinner meeting will be held on Thursday April 24th, 2014. I hope to see you there. If you have any questions or ideas for future ASM dinner meetings, please contact ASM.Edmonton@gmail.com

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April Events

ASM Technical Dinner Meeting

For the sixth technical dinner meeting of the season, ASM Edmonton will be welcoming Dr. Dongyang Li who will be speaking on the *Surface Engineering for Wear Control*.

Abstract:

Wear is one of the main material failure mechanisms in various industrial sectors. Wear results in significant capital loss for the repair and replacement of damaged facilities as well as the associated production loss. Surface engineering is an effective and economic approach to control the wear of materials. In this presentation, common surface modification coating techniques and treatments will be introduced and their advantages and disadvantages will be discussed. These surface techniques include thermal spray, hardfacing, vapor phase deposition processes, surface heat treatment and thermochemical techniques. Basic aspects of material wear will also be briefly discussed.

About the Speaker:

Dr. Dongyang Li is a Professor at U of A who leads a Surface/Wear research group. His main research interests include surface science and engineering, wear and tribology, and materials engineering. In addition to fundamental research on wear of materials, he has been in active collaboration with industrial partners for a number of Research and Development projects. His industrial partners include the Alberta oil sands industry (e.g., Suncor, Imperial Oil), materials suppliers, and foreign companies, such as Weir (slurry pumps, Australia), POSCO (pipeline steel, Korea), GIW (slurry pumps, US), Kennametals and Stellite (wear-resistant materials, US and Canada), etc.

Dr. Li has developed a comprehensive laboratory equipped with various facilities for wear testing and analysis. His Surface/Wear group has provided considerable consultation and testing services to local and international companies. Dr. Li is the editor-in-chief of the International Journal of Nano and Biomaterials and a member of editorial board for nine other journals in areas of tribology, wear, corrosion, materials and manufacturing. He is a contributor to The Smithells Metals Reference Book (chapters on Wear and Lubrication) and the Encyclopedia of Tribology.

Dates and Times:

Date: Thursday, April 24th, 2014

Registration: 6:00 PM

Dinner: 6:30 PM

Technical Program 7:30 PM

Location: University of Alberta Faculty Club

RSVP by April 22nd, 2014, 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

Upcoming Events

2013 – 2014 Events:

Thurs, Apr 24th – Technical Dinner Meeting
Topic: Surface Engineering for Wear Control
Speaker: Dr. Dongyang Li
Location: U of A Faculty Club

Thurs, Jun 5th – 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.](#)

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2014 ERSF Recap

The 2014 Edmonton Regional Science Fair (ERSF) was held on April 12th and 13th, 2014, at NAIT. The ERSF showcases science projects from Edmonton-area Elementary and Junior/Senior High School students. Connie Williams represented the ASM International Edmonton Chapter at the science fair.

Overall the projects showed thoughtful and, in some cases, inspired ideas that were well researched and represented. A great deal of effort went into modeling and demonstrating the projects and the science behind them. The stories behind the projects were often as engaging as the science and mechanics they represented. One elementary student explained that his idea for a catapult was the result of building similar machines from items he found while playing in the forest. The runner-up for the ASM award at the elementary level was a project which used snow as a resource for hydroelectric power generation. The elementary level award was given for a project that demonstrated the use of ferrous particles at the nano level in combination with a super magnet to clean up oil spills in an aqueous environment. For the Junior/Senior level, the runner up was awarded to a student who created a chromatograph. The award recipient for the Junior/Senior level was a project where cotton was converted into Oleophilic Cellulose and then compared to other organic compounds for crude oil absorption.

The enthusiasm evident in the presenters for their individual topics and science in general was infectious. Congratulations to all of the presenters and we look forward to the event next year!

Awards

Congratulations, Katherine Jonsson, recipient of the *ASM International: Emerging Professional Achievement Award*.

Katherine Jonsson, immediate past chapter chair of ASM Edmonton, recently won the Emerging Professional Achievement Award. This award was instituted in 2010 to recognize ASM volunteers who are recent graduates (0-5 years' post-graduation) who have made a significant impact on their local chapters and/or ASM International. The citation for Katherine's award nomination reads "For devoted service and significant contributions to the continual growth and development of the Edmonton Chapter over the past ten years."

Congratulations Katherine!

If you know an ASM Member who deserves recognition please do not hesitate to contact us at ASM.Edmonton@gmail.com

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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](#).