

# NACE

CALGARY SECTION

# NEWS

News about corrosion and the corrosion industry produced quarterly for members of NACE International in the Calgary area

## NACE Golf Tourney once again above par!

The NACE annual golf tournament drew 203 golfers for a beautiful day on the Elbow Springs Golf Course.

This year's winners were the foursome of: Robert Laxo, David Booth, Aissa Ven Der Veen, and Matt Henderson.

The day included:

- a hearty breakfast
- 6x \$10,000 hole in ones
- Steak dinner and BBQ on the course
- Prizes for every player.



*Happy golfers looking forward to getting teed off: Dean Jenson, Ken Wills, Jerry Bauman, Brent Harle, Sherif Maksoud, Doug Davey, Troy Adair, Doug Kellow.*

### Golf Sponsors

Thanks to our sponsors for once again making this event a terrific day for all who participated.

#### Skill Prize

International Paint – Devoe Coatings Inc.

#### Golf Cart

M-I SWACO – Production Technologies

#### Hole-in-One

NALCO Champion  
Baker Hughes  
M-I SWACO Production Technologies  
Pipe Tech  
E-Mac Corrosion  
Dynamic Risk

#### BBQ

On-Stream Pipeline Inspection

#### Breakfast

Inter Pipeline  
Corrosion & Abrasion Solutions Ltd  
Anotec Industries Ltd

#### Hole Sponsor

Energclear Services Inc  
FlexSteel Pipeline Technologies  
Anotec Industries Ltd  
Corrosion Technologies Limited  
Corrosion Service  
Canusa CPS  
Cloverdale Industrial Protective Coatings

#### Golf Balls

Corrosion Service company Ltd



## Message from the Chair

*The NACE Executive Committee has been busy discussing and planning for events, courses and member services to be offered this fall and throughout the year. While plans are still being finalized, we are excited about the directions in which we are going and the feedback we are getting from members.*

*The August golf tournament was once again a great success thanks to great sponsors and the super organization work done by James North.*

*The first year of our annual sponsor program is nearly completed and we look forward to continuing to provide this opportunity to NACE members in 2014. We will be contacting all our current sponsors for their feedback and continued participation. And we will be reaching out to our membership to see who else might be interested in this opportunity. A list of our current annual sponsors is on the last page of this newsletter.*

*We are hoping to schedule two or three technical luncheons throughout the year as they seem very popular as learning and networking events. More on these in the next month or two.*

*We just finished two rounds of NACE Basic Corrosion courses and upcoming are two Protective Coatings courses being offered for the first time here in Calgary. If you are interested in participating, register now through our website.*

*We are still working on establishing a student chapter of NACE Calgary and have received many student membership applications from both SAIT and University of Calgary.*

*Dates for this year's Teacher Materials Camp have been set for set for June 16-20 again at SAIT and registration opens December 23.*

*Calgary will also be hosting the 2014 OSHOW next November.*

*The NACE Calgary Executive looks forward to adding value to your NACE membership over the next year.*

*Neil Park*

### NACE Calgary Executive

**Chair** Neil Park

**Vice Chair** Prabhu Srinivasan

**Treasurer** Thane Schaffer

**Assistant Treasurer** Lindsay Webb

**Calgary Northern Area Trustee and Awards Chair** Doug Kellow

**Arrangements** James North, Chair; Sherif Maksoud, Vice-Chair

**Career Development** Steve Love, Chair; Christian Canto, Vice-Chair

**Membership** Jana Johnson, Chair; Laura Cardenas, Vice-Chair

**Program** Mario Salgado, Chair

**Sponsorships** Craig Ball, Chair

**Teacher Camp** Jennifer Dickason, Chair; Sherry Thompson, Vice-Chair

**Oshow Liaison** Beth Daniels

**Communication** Dave Gryzb

**CATS Liaison** Nick Suidgeest

**Member at Large**  
Neil Hay



The **NACE Mentoring Center** is where corrosion professionals connect to establish mentor/mentee relationships that foster personal and professional growth and development.

#### Find a mentor...

Connect with a professional in the industry to learn more, ask for guidance, discuss challenges, or seek advice. Whether you're a student or a professional seeking peer-to-peer insight, a mentor can help you navigate your next career move.

#### Be a mentor...

Share your expertise and experience with industry newcomers and other professionals seeking advice from a trusted peer.

#### Start now. Here's how it works:

1. Go to the **NACE Mentoring Center** and click "Mentor Registration" if you would like to act as mentor, or "Mentee Registration" if you would like to find a mentor.
2. Fill out the New Users form, including your name and e-mail, and create a password.
3. A validation e-mail will be sent to you. Click the link in the e-mail to validate your account.
4. Click to log in to the **Mentoring Center** and create your profile.
5. Search for mentors or mentees from within the Center, and e-mail individuals you would like to connect with.

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Once a mentor and mentee have agreed to connect, the official mentor relationship lasts for one year. Depending on the agreement between mentor and mentee, the professional relationship may continue past one year, though it will no longer be housed in the NACE Mentoring Center.

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#### If you have further questions about this program, please contact:

Cindy Tracy, Calgary Section Support Coordinator  
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cindy.tracy@nace.org

### Upcoming Courses

#### PCS1

Nov. 3-5, 2013

Calgary AB

[Click here](#) to register

#### PCS2

Nov. 6-8, 2013

Calgary AB

[Click here](#) to register.

#### Advanced Internal Corrosion for Pipelines

November 4-8, 2013

Edmonton AB

[Click here](#) to register.

#### Corrosion Control in the Refining Industry

November 4-8, 2013

Edmonton AB

[Click here](#) to register.

### Upcoming Events

#### Northern Area Western Conference

Edmonton, Alberta

January 27-30, 2014

[Click here](#) for more information and to register.

## Pipelines... the other side of the story

By Jana Johnson, Talisman Energy

*Many of us get asked questions about pipelines these days, particularly during the current controversy around the impacts of pipelines on communities and the environment. I put this piece together for my own use, and I hope many of you will find it a useful resource when you get asked questions about pipeline safety. Please note that the views expressed herein are those of the writer and not Talisman Energy Inc.*

### Why do we need pipelines?

- Pipelines are constructed because we all need energy in our homes and to get that energy to our homes it needs to be transported. Pipelines have been transporting oil and gas safely for many years:

<http://www.cepa.com/pipelines-part-of-canadas-past-and-future>

- Pipelines are the safest, most reliable method of transporting oil and gas across the country (transmission pipelines are 99.98% reliable): <http://www.cepa.com/pipeline-industry-categorically-rejects-the-notion-that-pipelines-are-unsafe-in-canada>

- The alternatives to pipelines are rail cars and trucks. In order to transfer the amount of petroleum products that are shipped every day in Canada by transmission pipelines (3,000,000 barrels), we would need 4200 rail cars or 15,000 tanker trucks (each tanker trucks holds approximately 190 barrels).

<http://www.cepa.com/about-pipelines/why-pipelines>

### What are pipelines and how are they made?

- Pipelines are hollow cylinders that are typically buried in the ground to transport oil, gas and water from one location to another.
- They're typically made out of carbon steel that is formed into a plate first, then rolled into the cylinder and welded down the length of each joint (~18m long). For a video on the process, see this link (1.5 min.):

[www.youtube.com/watch?v=JDMIn5vitgE](http://www.youtube.com/watch?v=JDMIn5vitgE)

- Then the joints are run through a coating mill where an external coating is applied. Coating technology has improved significantly in the past 30 years so it works much better at preventing external corrosion than it used to.

- This new coating is typically either extruded polyethylene or fusion bond epoxy (FBE). Small pipelines may be coated with extruded polyethylene but virtually all new transmission pipelines would be coated with fusion bond epoxy. If FBE fails, the cathodic protection system (a back-up system to prevent external corrosion) can protect the failed coating areas and prevent external corrosion. If you're interested, here's a 2 min video on the FBE coating process:

<https://www.youtube.com/watch?v=YtLI9qXZw4c>.

### Pipeline Service Types

- There are three categories of pipelines: "upstream", "mid-stream" and "downstream"
- Upstream companies produce oil and gas and transport it to a small facility where most or all water is removed and it is processed a little, but not to a point where it is a useable product.
- Midstream pipelines take the somewhat processed production and transport it to a big facility where it is further treated, refined and made into the products that we use to fuel our cars/airplanes/homes.
- Downstream pipelines (also known as transmission lines) transport that final product to where it is used (homes, gas stations, etc.)

### Statistics and Hot Topics

- Most newsworthy failures these days are on very old pipelines. This is important because these failures are being used to say that new pipelines should not be built. Although new pipelines can fail as well (typically would be due to poor quality pipe or welding, technology), there have been significant improvements over the

years on coating types, regulations, initial testing and quality control systems.

- The recent unfortunate rupture in Arkansas was due to a manufacturing defect in the weld according to a third party engineering analysis on the failure. The line was constructed in 1947/48. <http://www.treehugger.com/energy-disasters/exxon-cites-manufacturing-defect-arkansas-oil-spill.html>.
- Most of the newsworthy pipeline failures are ruptures, because they are most detrimental to the environment and people. However, some of the statistics below reference spill volume and "failures". The failures could be either a leak or a rupture, leaks being much smaller volumes released.
- The Enbridge pipeline that they are trying to build through B.C. has had so much scrutiny that they have proposed a significantly thicker wall than would typically be necessary to provide a larger safety factor to prevent a potential failure. All the technical data (including a huge array of reports and the economic benefits it would bring) are available on their website: <http://www.northerngateway.ca/economic-opportunity/benefits-for-british-columbians/?gclid=CKPM2MqLs7kCFsRyQgodl38AAQ>

### National Stats (Canada only)

- 110,000km of downstream pipelines in Canada (<http://www.cepa.com/pipelines-safe-by-design>). CEPA represents downstream/transmission pipeline operators.
- NEB (National Energy Board) regulates pipelines that cross provincial boundaries. The volume of pipeline releases under NEB jurisdiction, per km of pipe in the ground has decreased from 32 to 7 m<sup>3</sup>/1000km from 2009 to 2012 (<http://www.neb-one.gc.ca/clf-nsi/rsftyndthnvrnmnt/sfty/pplnncdntgrprtng/pplnncdntshydrcribnsplls/pplnncdntshydrcribnsplls-eng.html>)
- The Canadian Standards Association has a document over 400 pages that provides guidance on design, construction, testing and operation of pipelines in Canada. This

document requires each operating company to have an Integrity Management Program for Pipelines, which is auditable by local regulators.

### Alberta

- 415,000km of pipeline in Alberta in 2012 (includes upstream, midstream and downstream) regulated by the AER (page 9 of the document: <http://www.aer.ca/documents/sts/ST57-2013.pdf>)
- Below are pipeline failures per 1000km in Alberta in 2012 (<http://www.aer.ca/documents/sts/ST57-2013.pdf>, page 11). Alberta is the province with the most pipelines in the country.
- A recent independent review of the Alberta regulatory body Alberta Energy Regulator (AER) formerly ERCB (Energy Resources Conservation Board) concluded that the Alberta regulator is a leader in establishing best practices to manage the industry appropriately: <http://alberta.ca/release.cfm?xID=34837BA1BC6E0-C585-A3BB-28688A4DAAB8B7F6> B.C.
- 39,023km of pipe in BC, regulated by the BC OGC in 2011 (see the 2011 Pipeline Performance and Activity report, page 4 at: <http://www.bcogc.ca/public-zone/reports>.)
- Since B.C. has many less pipelines, they don't have as much historical data. But page 7 in the above link shows that incident frequency was 1.03 incidents/1000km in 2009, 1.38 in 2010 and 0.87 in 2011.

## NACE Calgary Annual Sponsors

### Gold



### Silver



### Bronze



Donations from our annual sponsors are used to support our Awards Dinner, Technical Program events, and networking/educational programs with SAIT and the University of Calgary.

We also provide additional sponsorship opportunities for companies who prefer to support an individual event. For more information [click here](#) to visit our sponsorship page on the NACE Calgary website.



NACE News is produced four times a year  
by the Executive Committee  
of NACE Calgary Section.

[Click here](#) to provide feedback,  
or to submit an article or story idea.