Emerging Inspection & Weld Integrity Assessment

11th Annual Educational Seminar
Edmonton, Alberta - February 3, 2017

The AWS Alberta Section will be hosting its eleventh annual one-day educational seminar on February 3, 2017. We have lined up some engaging speakers to give you a detailed look at the latest in nondestructive examination techniques for weld inspection and evaluation of material properties. In particular, we'll discuss IWEX 3D ultrasonic tomography, TDW pipe identification, digital radiography and nondestructive measurement of fracture toughness and material strength properties.

Our keynote speaker for this event will be Glenn Tubrett, CEO of CINDE. Glen will give an update on the trends and issues facing the inspection industry and will talk about his plans to encourage more young people to choose our skilled trade as a career choice.

WHEN: Friday, February 3, 2017
WHERE: Four Points by Sheraton, Edmonton South
7230 Argyll Road Edmonton, AB (for map see Hotel Map Link)
TIMES: 7:30 am Registration & Breakfast
8:30 am Morning Presentations
11:30 am Buffet Lunch
12:30 pm Keynote Speaker and Afternoon Presentations
3:45 pm Networking and One-on-One Discussions
COST:
Before Jan 21, 2017: $250 for Members
“Early Bird Rate” $300 for Non-Members
$55 for Student Members
After Jan 21, 2017: $300 for Members
$350 for Non-Members or Walk-Ups
$55 for Student Members
Member rates apply to AWS, CWA, ASM, ASME and similar technical societies.

Register online at https://www.eventbrite.ca/aws2017seminar
$50 service charge for cancellations. Reserve your seat today.
Walk-up space limited.

Registration questions: rwitzke@blackrockemi.com

http://sections.aws.org/alberta/
Keynote Speaker

Glen Tubrett, CEO, CINDE

Glen Tubrett has been Chief Executive Officer at the Canadian Institute for Non-destructive Evaluation since May 2016. Prior to joining CINDE he held several senior executive roles at the Canadian Standards Association. His experiences include running the national standards development program for many industry sectors including the CSA welding program and CSA’s international certification business. Glenn holds a bachelor of electrical engineering degree from the Memorial University of Newfoundland.

Glenn will give an update on the trends and issues facing the inspection industry and talk about his plans to encourage more young people to choose our skilled trade as a career choice.

Morning Presentations

IWEX, 3D Ultrasonic Tomography

Peter den Boer, Applus RTD Canada

Peter den Boer is Advanced Technology Manager for Applus RTD. He is responsible for development, implementation and management of Advanced NDE services. He has 35 years in providing weld inspection services within the Nuclear, Pipeline and Petrochemical industries. He is a member of ASNT and CINDE and (co)author of several papers and an Electrical Engineering graduate.

IWEX (Inverse Wave field EXtrapolation) is a new ultrasonic array technology that shows great potential in both defect detection and characterization, combined with a simplified presentation of inspection results due to an imaging approach. This technique is currently being implemented in the Applus RTD IWEX 3D Imager.

In order to quantify its potential and to explore its position in the technological landscape, it is compared in practice to a selection of advanced UT techniques currently available on the NDT market, including Time of Flight Diffraction (TOFD), Phased Array (PA) Tandem and PA sectorial scan.
Advances in Digital Radiography for Weld Inspection
Glenn Snell, Carestream NDT

Glenn Snell is the Area Sales Manager for Carestream NDT and has worked with different forms of radiation inspection, including medical and NDT, for 34 years. He is a graduate of Dawson College, studying Radiation Technologies. Mr. Snell currently offers consulting, installation and training for end users migrating from analog to digital technologies for Non-Destructive Testing.

With X-rays being discovered in 1895, film has been widely accepted as the standard recording medium in NDT for many years. The advancements in the quality and reliability of digital alternatives has led to widespread acceptance by industry, end users and written into ASME and CSA Z662 code. Discussion will be on two specific digital RT technologies: Computed Radiography (CR) and Direct Radiography (DR). Focus will be on principles of the technologies and their advantages over film.

Pipe Identification (PI)
Chuck Harris, T.D. Williamson

Chuck Harris has over 23 years' experience in the oil and gas industry, with a focus in pipeline integrity. After holding roles in ILI data analysis, pipeline integrity sales, sales management, and operations, he is currently responsible for T.D. Williamson’s Pipeline Integrity Product Lines. Chuck has been involved with industry organizations such as NEB, CEPA, PHMSA, PRCI, INGAA, SGA, API and others, and is the current Vice-President of the Pigging Products and Services Association (PPSA).

Pipelines constructed in the last 10 to 20 years should have reliable, traceable, verifiable, and complete records. As such, pipeline operators should possess comprehensive records, including hydrostatic test reports, MAOP validation, and mill-test reports (MTRs), for specific lots of pipe. What about older pipeline segments, or segments that have been through acquisitions? Often these historical, detailed, records are misplaced, lost, or simply never transferred with the sale of an asset. A solution to this need, overcoming missing or incomplete pipeline data, is called Pipe Identification (PI) which incorporates advanced in-line inspection and non-destructive examination technologies to recreate important pipe-material records, close documentation gaps, and provide information that will ensure appropriate level of risk is applied to specific pipe joints or segments.
Afternoon Presentations

Massachusetts Materials Technologies
Simon L.J. Normand, Co-Founder of MMT

Simon Normand (Norm) is co-founder of Massachusetts Materials Technologies. MMT provides nondestructive testing solutions for material strength and toughness with a current focus on oil and gas transmission pipeline condition assessment. Before joining MMT, Norm was a consultant on heavy vehicles for Volvo Group Global, and was, for a decade prior, engineer at Diversified Technologies, a US Department of Defense solution provider in the areas of instrumentation and power. Norm’s achievements as lead engineer include a helicopter lighting system for the US Navy, a precision calibration instrument for US Air Force radar sites, a 50,000-volt pulse generator for NASA, and an underwater emergency control system for RSN, a miles-deep, 1000-mile long NSF ocean observatory. Simon holds a Master’s degree from Harvard University.

Current NDE methods do not accurately quantify fracture toughness and tensile properties, knowledge of which helps indicate if a joint 1) has adequate strength, and 2) can resist the growth of unavoidable small cracks. In this presentation, we will describe two new technologies which address these challenges. One technology, our latest, provides information specific to fracture toughness in plane strain tension. The other technology, which is more mature and is currently being deployed, estimates yield strength, UTS, and strain-hardening exponent from the geometry of superficial, scribed grooves.

Pipeline Defect Assessment
Jason Skow, Manager, Integrity and Operations, C-FER Technologies

Jason Skow, P.Eng., has a Bachelor’s of Science in Mechanical Engineer from the University of Regina (2002). He has 14 years of experience in engineering design and management and joined C-FER in 2011. During his 6 years with C-FER, his technical work has focused on pipeline integrity management with a focus on risk assessment and defect management. Prior to C-FER, he has worked in the area of pipeline operations and in engineering consulting.

All pipelines are susceptible to a wide range of failure threats including corrosion and cracking. With over 800,000 km’s of pipeline in Canada alone, pipeline integrity engineers face the challenge of assessing a large quantity of defects with locations spanning huge distances using uncertain information and conditions data. The safety, environmental and financial consequences of a single incorrect evaluation can be disastrous. This presentation will review the methods and models that pipeline integrity engineers use to make these critical decisions. Deterministic and probabilistic methods will be introduced and areas of active research will be highlighted.
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