

# Welding Processes and Microstructure, Failure Analysis and Inspection Techniques of Welds

Friday, Feb 24, 2012



**Edmonton  
Chapter**

**Alberta Innovates - Technology Futures**  
(Formally: Alberta Research Council)  
**250 Karl Clark Road**  
**Edmonton, Alberta**  
**Main Auditorium**

## ANNOUNCEMENT

The focus of this one day seminar is to introduce various welding processes and weld microstructures, failure analysis of welds and weld inspection techniques including demonstrations of common inspection equipment. ASM Edmonton is pleased to invite five different speakers, all prominent welding specialists in Edmonton, to deliver hour-long presentations on five different areas to provide a well-rounded and informative seminar on the broad and diverse topic of welding in Alberta. The one day seminar runs from 8:30 AM – 3:30 PM (registration beginning at 8 AM) and includes breakfast, lunch and snacks.

### Course Outline:

- Welding Processes - introduction and overview of various welding techniques, including SMAW, GTAW, PAW, SAW, FCAW and MCAW.
- Weld Microstructures - introduction to carbon steel welding metallurgy and the resulting WM and HAZ microstructures.
- Cracks in Pressure Vessel and Piping Welds - performing an accurate and detailed failure analysis illustrated using case studies from pressure vessels and piping welds.
- Survey of Weld Inspection Techniques - introduction to the conventional NDT techniques ultrasonic testing and radiographic testing, and advanced NDT technique phased array, digital radiography and TOFD (time of flight diffraction) applied to weld inspection.
- Demonstrations - demonstration of UT thickness gage, flaw detector and phased array UT with TOFD scan of welded plate.

### Who Should Attend

Anyone who is interested in enhancing their knowledge of welding techniques and processes specific to Alberta as well as the various NDE techniques and failure analysis of welded structures. This seminar is an excellent opportunity to meet local welding experts and to enrich your knowledge of this very relevant topic in Alberta.

### Prerequisites

No prerequisites are required; however, some prior knowledge of materials would be advantageous.

### Presenters:

Welding Processes - Joel Pepin, M.Sc., P.Eng

Alberta Innovates Technology Futures - Materials Engineer

Weld Microstructures - Matthew Yarmuch, M.Sc., P.Eng, IWE

Alberta Innovates Technology Futures - Program Leader - Welding and Slurry Systems Engineering

Failure Analysis of Welds - Ana Benz, M.A.Sc., P.Eng

IRIS NDT - Principal Engineer - SPI NDT

Survey of Weld Inspection Techniques - Dr. Eric Sjerne, M.Sc, Ph.D

IRIS NDT - Vice President - Technology Development and Recruiting

Demonstrations - Michael Prendergast, Jason Hollett, Jonathan Stevenot

Olympus NDT Canada Inc. - Advanced Product Sales - Western Canada

Pre-register your seat now

**Nicki-Lee Robertson**

ASM Edmonton Chapter

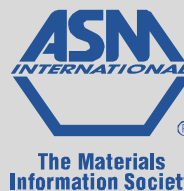
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<b>Attendee Name/s</b>	1. 2. 3. 4.
<b>Company Name</b>	
<b>Address</b>	
<b>Phone</b>	
<b>Fax</b>	
<b>Email</b>	
<b>Are you a member of a Professional Society?</b>	ASM, SME, NACE, ASME, AWS, CWS
<b>If so, Membership #</b>	
<b>Check Amount Enclosed</b>	\$

Do you agree to distribute your contact details to other attendees **YES / NO**

<b>SEMINAR</b>	Before Feb 19, 2012	After Feb 19, 2012
Professional Society Members	\$295	\$345
Non-members	\$345	\$395
Students	\$100	\$150

Make checks payable to **ASM Edmonton Chapter**; do **not** add **GST**.

#### Mail to

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