CCWJ
CANADIAN CENTRE FOR WELDING + JOINING

AWS
American Welding Society
ALBERTA - SECTION 216

the STEEL centre

The Canadian Centre for Welding and Joining
in cooperation with AWS Alberta Section and the Steel Centre
proudly present a two day professional development seminar:

MARCH 3, 2020

GETTING THE WELDS YOU NEED AND WANT

MARCH 4, 2020

STRUCTURAL BOLTING

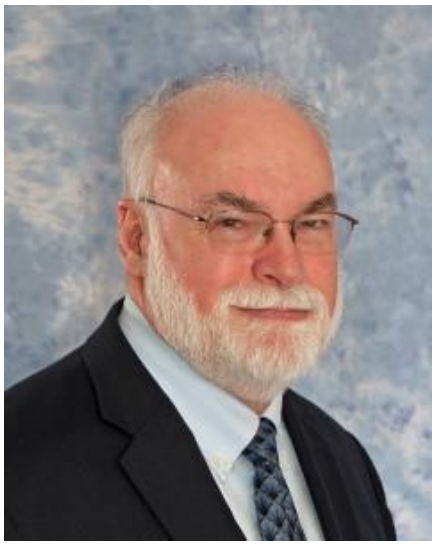
WITH

ROBERT E. SHAW JR., PE

University of Alberta
8-207 Donadeo ICE Bulding
9211 116 Street NW
Edmonton

Register at: https://2020ccwjseminar.eventbrite.com

$400 for CWBA, ASM, ASME, AWS, NACE, CISC, SME and Steel Centre members.
$450 for non-members.
Register before February 4 and receive an early bird discount.
$75 for students (must have valid student ID)



Robert E. Shaw, Jr., PE is President of the Steel Structures Technology Center, Inc., Howell, Michigan. A graduate civil engineer from Rose-Hulman Institute of Technology, he began his career in the steel construction industry in 1973.

Mr. Shaw is a long-standing member of the American Welding Society D1 Structural Welding Committee and serves on Subcommittees on Steel (D1.1), Seismic Welding Issues (D1.8), the Executive Committee, and Task Groups on Design and on Prequalification.

With the International Institute of Welding, he serves as Chair of Commission XVIII on Quality Management in Welding and Allied Processes, is past-Chair of Commission XV on Design, Analysis and Fabrication of Welded Structures, and is current Chair of Subcommission XV-C on Fabrication.

He serves on the American Institute of Steel Construction Committee on Specifications (AISC 360 and AISC 341), the Task Committee on Quality Control and Quality Assurance, and the AISC Connections Prequalification Review Panel (AISC 358) for seismic connections and previously served on Task Committees on Connections and on Seismic Design.

Mr. Shaw is Vice-Chair of the Research Council on Structural Connections and serves on the Specifications Committee. He is the Task Group Leader of TG2 Bolting on ISO TC 167 WG3, preparing a new International Standard on the Execution of Steel Structures. In this role, he is incorporating the major standards on structural bolting used around the globe. He is also a member of ASTM Committee F16 on Fasteners.

Mr. Shaw, through the SSTC, has consulted on welding, bolting and quality issues on numerous significant steel structures, including those in the USA, Canada, Mexico, Singapore and South Africa. He has presented seminars on welding, bolting and inspection of steel structures in numerous countries, including the USA, Canada (for both CWB and CISC), Ecuador, Australia, New Zealand, India, South Africa, Nigeria and Iran.

Mr. Shaw was the principal author of FEMA 353 for the SAC Joint Venture Program to Reduce Earthquake Hazards in Steel Moment Frame Structures, Phase 2, and served on the Welding and Joining Technical Advisory Panel. The SSTC conducted the Federal Highway Administration / NHI course on “High Strength Bolts for Bridges” with Mr. Shaw the principal instructor.

Before founding the SSTC in 1990, Mr. Shaw served the American Institute of Steel Construction as Associate Director of Education (1986-1990) and as Regional Engineer (1981-1986). In 1987, he created and ran the first Student Steel Bridge Competition, now a global activity. Prior to joining AISC, Mr. Shaw was a Sales Engineer for the Mississippi Valley Structural Steel Division of Bristol Steel and Iron Works, Inc.

Day 1 (Tuesday, March 3, 2020)
8:00 am to 5:00 pm

Getting the Welds You Need and Want

Most engineers are familiar with the design provisions for welded connections but may struggle with accurately conveying their design details and requirements to ensure that mechanical properties, quality and structural performance are achieved. These issues affect all in the construction process: engineers, fabricators, erectors, inspectors, constructors and owners.

This seminar will provide guidance regarding:

- Proper use of welding symbols
- Good and bad joint details, from both economic and performance perspectives
- Document submittals requirements and review
- Welding procedure specification (WPS) development and review
- Specifying inspection and nondestructive testing
- Quality criteria - code-based and engineering-based alternatives
- What the codes don't tell you - brittle fracture concerns
- Improving fatigue life of welded joints
- If it cracks, what to do and how to fix it

Day 2 (Wednesday, March 4, 2020)
8:00 am to 5:00 pm

Structural Bolting – the Other Joining Method

Buildings, bridges, machinery and equipment use bolts in addition to welds, but unlike welding, there are rarely bolting procedure specifications, bolting engineers, bolting supervisors, or qualification tests for bolting installers. In addition, sometimes bolted joints are inappropriately specified, use inappropriate materials, are incorrectly assembled and/or tightened, or are improperly inspected.

This seminar will provide guidance on

- Selecting the appropriate bolted joint - snug tight, pretensioned, slip critical
- Selecting the appropriate bolting materials - strength, type, corrosion protection
- The torque-tension relationship
- Jobsite product identification and protected storage
- Pre-installation verification testing and rotational-capacity testing
- Determining the snug tight condition
- Pretensioning procedures - turn-of nut, twist-off bolts, direct tension indicators
- New bolting products and installation methods
- Specifying and implementing inspection practices
- Why bolts break, and what to do about it
- Developing a bolting personnel qualification program
- Differences between bolting of pressure piping flanges and bolting of steel structures

This seminar will include numerous hands-on demonstrations.