the pressure equipment safety authority

THE PRESSURE NEWS

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ABSA's New Executive Management Team

Mike Poehlmann
President and Chief Executive Officer

Robin Antoniuk
Vice President Technical Services and Chief Operating Officer

Monica Elfstedt
Vice President Support Services and Chief Financial Officer

Djordje Srnic
Administrator and Chief Inspector

Amanda Klyne
Quality Manager

ABSA is pleased to announce that effective May 2, 2022, it is undertaking a major restructuring of its management team.

ABSA's Board of Directors has appointed Mike Poehlmann as President and Chief Executive Officer (CEO). Mike starting working in the pressure equipment industry in 1976. Mike is an Alberta 1st class power engineer, a professional licensee member of APEGA, and a safety codes officer. He joined ABSA as Shop Inspector in 1996 and has since held a number of progressively responsible positions. As a member of ABSA's management team for over 20 years, Mike has been a leader in continuous improvement of ABSA's processes. He has served as General Manager, Chief Inspector, and Administrator since 2016. As ABSA's President and CEO, he will continue to retain accountability for executive oversight in leading the organization, with an increased focus on risk management, corporate strategy, and long-term planning.

Upon his appointment by the Board of Directors, Mike appointed others to new positions as follows:

Robin Antoniuk has been appointed Vice President Technical Services and Chief Operating Officer (COO). Robin began with ABSA as Inspector in 1999, and after initially gaining experience helping the Design Survey department, rejoined the Inspections department where he held progressively responsible positions, moving from Inspector, to Assistant Supervisor, to Supervisor, and finally to Inspection Manager. In 2016, Robin was given the role of Assistant Chief Inspector, with a scope of duties that included participating in the further development of ABSA's technical programs and overseeing internal support services. As Vice President Technical Services and COO, Robin will oversee the Inspection, Design Survey, and Examination and Certification departments as they fulfill ABSA's mandated roles under Alberta's pressure equipment safety legislation.

Monica Elfstedt has been appointed Vice President Support Services and Chief Financial Officer (CFO). Monica is a Chartered Professional Accountant (CPA) and joined ABSA in November 2019. She brings more than 20 years experience in senior financial and upper management roles for several organizations, including an extensive history in both financial and management consulting. Upon joining ABSA, Monica was immediately recognized to be a strong and resourceful leader and an excellent fit for the organization, and in 2020 was appointed the role of Manager of Finance and Administrative Services. As Vice President Support Services and CFO, she will oversee the support departments, including Human Resources, Information Technology, Finance and Administrative Services, Records Management, as well as the Training department.

Djordje Srnic has been appointed Administrator and Chief Inspector. Obtaining his Bachelor's Degree in Mechanical Engineering (1984) and Master of Science Degree (1990) from the University of Belgrade, he has worked on various projects gaining international experience. His early career included working as Boiler Design Engineer, Design Team Leader, and Project Engineer in boiler design and leading equipment delivery projects for power plants. Moving to Canada in 1996, Djordje served as Design Survey Engineer for ABSA from 1996 until his promotion to Design Survey Manager in 2007. In 2014, Djordje was appointed concurrent roles of Manager, Codes and Standards, and Assistant Chief Inspector. As Administrator and Chief Inspector, Djordje will exercise the powers and authorities necessary to perform the duties ascribed to those roles under the Safety Codes Act. He will represent Alberta's interests as a member of ACI, the National Board, and various CSA and ASME technical code and standard committees. He is a Professional Engineer and the recipient of the CSA 2019 Award of Merit.

Amanda Klyne has been appointed Quality Manager. Amanda first joined ABSA as Human Resources Assistant in 2007. After 12 years of providing exceptional service to ABSA's employees in the Human Resources department, Amanda took on a new challenge in 2019 when she accepted a new position as Corporate Quality Assurance Coordinator. In this newly developed role, she was tasked with working with ABSA's management team for the ongoing development and implementation of ABSA's ISO 9001 quality management system. In her new role as Quality Manager, Amanda will report directly to the President and CEO and will be responsible for the development of the newly formed Quality Department and the continued development and maintenance of ABSA's ISO 9001 quality management system.

ABSA's management and staff are looking forward to continuing to work to meet industry's needs and to fulfilling ABSA's vision to lead in pressure equipment safety.

COVID-19 Update — Offices Reopened March 16

After a full two years of having its offices closed due to the COVID-19 pandemic, ABSA is excited to announce that it has reopened its Edmonton and Calgary offices to in-person traffic as of March 16. Services that were available from these offices, such as in-person renewal of certificates, seminar registrations, and registration for power engineering examinations have resumed, and other in-person services will return to normal over the coming weeks.

Guests are asked to stay away from offices if they are feeling unwell or exhibiting any symptoms of respiratory illness, or if they have had a recent known exposure to COVID-19. Masks are optional for ABSA employees and guests, unless required by local municipal authorities.

If you have any questions about policies or about the availability of certain services, please feel free to call ahead before your visit – locations and contact numbers for all ABSA offices are included on the last page of each issue of The Pressure News, but please note that only the Edmonton and Calgary offices are open to walk-in traffic. ❖

First Meeting of the Global Pressure Equipment Forum

As discussed in the December 2021 issue of The Pressure News, ABSA is working to help establish a new Global Pressure Equipment Forum to explore potential opportunities for collaboration and cooperation between pressure equipment jurisdictions throughout the world. The forum held its first meeting at the end of January and included more than a dozen participants representing owner-user organizations, engineering companies, Canadian provincial jurisdictional authorities, and an accredited notified body from France.

Participants in the January meeting generally agreed the forum was important and necessary – it was noted in particular that although the safety programs of many jurisdictions initially look similar, there are significant variations and incompatibilities between some regions, and there are ample opportunities for improvement. The overall tone of the meeting was optimistic, and feedback from initial participants was positive and enthusiastic.

Some of the forum's first tasks will be to establish the group's structure and specific goals, and to promote participation by a wider variety of stakeholders, including additional European and other overseas jurisdictions. Meetings are planned to be held three times a year, in January, May, and September, and will be held electronically in order to facilitate participation by remote parties. Persons or organizations that would like to contribute to this effort are invited to email ABSA's Technical Advisory Group for further information, at tag@absa.ca. ❖

Alberta Code Update Seminar — Online Only for 2022

Each year, ABSA invests significant resources into studying new published editions of the codes and standards adopted by the Pressure Equipment Safety Regulation. One of the outputs of these efforts is the annual Alberta Code Update Seminar, which aims to teach industry stakeholders about the changes and other relevant topics.

This year, new code editions are expected to be published only for the ASME B31.1 and possibly the ASME B31.3 pressure piping codes. Due to the low volume of expected code publications, and due to the potential for continued uncertainty with respect to planning in-person events due to the COVID-19 pandemic, ABSA has chosen to make code update material available online and at no charge again in 2022.

ABSA maintains an email distribution list that is used to announce new learning opportunities – the best way to keep up to date with respect to new learning content, including the Alberta Code Update seminar, is to subscribe to ABSA's Seminar News email subscription service. Individuals can subscribe by navigating to ABSA's website at www.absa.ca, and clicking the 'Subscriptions' link at the top of the page. ❖

IPEIA's 25th Anniversary Conference & Exhibition

Earlier this March, the International Pressure Equipment Integrity Association (IPEIA) returned to substantially normal operations with the hosting of its 25th-anniversary conference and exhibition in Jasper, Alberta. Given the time of year the conference is held, the IPEIA conference had been one of the last major in-person events that many patrons had attended before the COVID-19 pandemic in early 2020, and now has turned out to be one of the first major in-person events to resume as the world has begun to re-open.

This year's conference featured a significant change of venue, being held at Jasper Park Lodge rather than its usual location in Banff. Although the new venue is smaller than what conference attendees had been used to in the past, it proved to be comfortable and accommodating, and performed well in facilitating the conference's keynote speakers, technical presentations, focus groups, exhibition, and training and networking events. Conference attendees found that the Jasper Park Lodge's staff were friendly and accommodating, and were pleased with the hospitality extended to guests.

The events of the last few years have posed an unprecedented challenge for many organizations, and in IPEIA's case, survival has been possible due to a change from its previous focus on an annual mid-winter conference, to offering a year-round, value-added membership with the conference as its summit. IPEIA is striving to continue to extend value to its membership year-round, with plans for remote learning opportunities and the potential for regional networking events. For more information or to register as a member, please visit registration.ipeia.com. ❖

Use of 2¼Cr-1Mo-¼V Steel for Pressure Equipment Construction

Over the years, there has been a gradual move away from 2¼Cr-1Mo (Grade 22) low-alloy steels and towards 2¼Cr-1Mo-¼V (vanadium-modified Grade 22) steels, particularly for the manufacture of heavy-walled, high-service-temperature reactor vessels that are subjected to high hydrogen levels, making them susceptible to high-temperature hydrogen attack and temper embrittlement. These materials are similar to one another in that they're both considered to be low-alloy, chromium-molybdenum steels that exhibit favorable mechanical properties at reasonably high temperatures, and both fall into the same welding group, being classified by ASME Section IX as P-number 5A, group 1 materials, but the vanadium-modified variant exhibits significantly improved resistance to these attack mechanisms. The higher allowable stresses assigned to the vanadium-modified alloy also makes it attractive to equipment owners and manufacturers, as an approximately 30% increase in allowable stress results in a corresponding decrease in required thicknesses of components, reducing overall weight, making manufacture more practical, and reducing overall manufacturing costs.

Although the superior strength properties of 2¼Cr-1Mo-¼V steel make it attractive, there are significant caveats that equipment owners must be aware of before specifying its use. It has been well documented that the vanadium-modified variant is more difficult to work with and requires significantly more care during manufacture, in particular with respect to producing sound welds. Some of the special considerations it requires include careful control of preheat and interpass temperatures during welding, and intermediate stress relief, beyond the minimum requirements given by common codes of construction. When submerged arc welding (SAW) is used, the material can be subject to a particularly problematic phenomenon known as reheat cracking, which causes subsurface cracking of welds when they are cooled and then subjected again to elevated temperatures either during heat treatment or in service. To make matters worse, reheat cracking has been observed in production welds even when production test plates have been produced which did not exhibit the phenomenon. In cases of thinner components where heat treatment can be avoided, there are often significant problems with weld metal ductility, and manufacturers have at times had trouble meeting ductility requirements even when modest MDMTs have been specified. Although the number of manufacturers experienced in working with the material has gradually increased over the years, successful fabrication depends heavily on the manufacturer's experience and expertise with the material.

Despite the potential caveats involved in working with 2¼Cr-1Mo-¼V steel, its mechanical properties and resistance to high-temperature hydrogen attack make it a valuable material for certain applications, and its use is permitted by several of the construction codes adopted by section 6 of the Pressure Equipment Safety Regulation. For the construction of pressure vessels, both ASME Section VIII-1 and ASME Section VIII-2 list several material specifications allowing its use, and it could potentially be justified for use in pressure piping components using the provisions of the ASME B31.3 Process Piping Code for unlisted materials. Code users are cautioned, however, that adopted construction codes represent a minimum set of requirements, and that in some cases additional expertise or experience is required in order to make proper use of permitted materials or construction techniques. With respect to 2¼Cr-1Mo-¼V steel, ASME Section VIII-2 provides direct guidance that is not found in ASME Section VIII-1: subparagraphs 7.5.3.1(f) and 7.5.4.1(e) caution users that in particular, SAW welds in 2¼Cr-1Mo-¼V steels require ultrasonic examination using techniques that are not within the scope of the code, and refers to API RP 934-A for further details. Reference is also made to paragraph 2.2.3.2, which places responsibility on equipment owners to specify additional requirements as may be appropriate for the intended service of the vessel. Although no such examination requirement is established in ASME Section VIII-1, code users and equipment owners are cautioned that the hazards still exist for Section VIII-1 construction, and it is strongly recommended that users of these materials engage manufacturers who have the relevant expertise to ensure that the equipment can be designed and constructed so that it will be safe throughout its service life.

Alberta's Safety Codes Act gives a definition for 'owner' which applies to pressure equipment, and includes much more than the equipment's literal owner in terms of legal property ownership. The definition specifically includes "a lessee, a person in charge, a person who has care and control and a person who holds out that the person has the powers and authority of ownership or who for the time being exercises the powers and authority of ownership." The purpose of this general and reasonably extensive definition is to ensure that the persons and organizations that have direct day-to-day control over the equipment can be held responsible for its safe operation and maintenance, and to prevent evasion of these responsibilities given that matters of public safety are at stake. Although construction codes are adopted to establish minimum legal requirements, they presume that the user has a base level of competence with respect to the materials, processes, and design concepts that they establish, and in Alberta, legal responsibility for compliance and safety of the equipment is placed heavily upon the 'owner' of the equipment. ABSA exists also to facilitate public safety through verification, monitoring, and education, but there is an expectation that the organization that owns and operates the equipment is competent to provide suitable specifications at the time of purchase, and to maintain and operate it safely throughout its service life. ❖

National Board Article: ASME Section VIII-1 Changes

When the 2021 Edition of the ASME Boiler and Pressure Vessel Code was published last July, ABSA undertook an extensive review of changes to the new edition and made a special effort to educate Alberta stakeholders about new requirements established for designer qualification and assignment of "responsible charge" for code design. ABSA hosted an online information session in August, and included a one-hour presentation in the 2021 Alberta Code Update Seminar; recordings of both are still available at no charge on ABSA's learning management system at lms.absa.ca. As of January 1, these changes have been mandatory for code-stamped work in Alberta.

ABSA has become aware of another excellent resource with respect to these changes, published as an article entitled 'What Team Leaders and Inspectors Need to Know About Engineering Requirements in the ASME Section VIII, Division 1, 2021 Edition' on pages 30-33 of the Winter 2022 issue of the National Board's quarterly news publication, 'National Board Bulletin'. If you do not have access to a printed copy, this publication is available on the National Board's website at www.nationalboard.org. ❖

ABSA Seminars — In Person and Online

ABSA has a long-standing reputation for putting on high-quality and engaging educational seminars, teaching stakeholders about Alberta' pressure equipment legislation and various aspects of pressure equipment safety. Some of ABSA's scheduled seminar offerings include:

Pressure Equipment Safety Legislation (PESL) (2 days)

The Pressure Equipment Safety Legislation seminar is ABSA's flagship seminar and a recommended starting point for most people involved in the pressure equipment life cycle. It provides a general introduction to pressure equipment safety requirements in Alberta, discussing the legislation and adopted codes and standards, and getting into details about some of the most important requirements for design, registration, construction, installation, operation, and decommissioning pressure equipment. It is available either as a two-day live seminar, or on demand on ABSA's Learning Management Service.

Remaining in-person sessions for 2022 are planned for Edmonton on June 8-9, and November 9-10. Calgary sessions are planned for April 6-7th and October 5-6.

Pressure Piping Fabrication Requirements & Quality Control (2 days)

ABSA's 'Pressure Piping Seminar' starts with a quick review of Alberta legislation and CSA B51 as they pertain to piping, and then delves more deeply into the ASME B31.3 pressure piping code, which is adopted as mandatory by Alberta legislation. Some topics include quality management system requirements, welding requirements, inspection and examination requirements, and hydrostatic leak tests. The seminar includes a hands-on component in which the group examines a piping module and goes through its construction documentation.

Sessions for 2022 are planned for Edmonton on May 4-5, October 12-13, and November 30 - December 1, while Calgary sessions are planned for June 15-16 and November 2-3.

Pressure Relief Device Requirements & Recommended Practices (2 days)

This seminar spends a full two days examining requirements related to pressure relief devices in more detail. It discusses the philosophy of Alberta's legislation with respect to overpressure protection, the requirements of adopted codes and standards, and goes over ABSA's *AB-524: Pressure Relief Devices Requirements* document. It teaches about the requirements for design, selection, testing, and marking of pressure relief valves, and then goes over some of the recommended practices described by API 520, and API 576 for installation, inspection, and servicing.

In-person sessions are planned for May 25-26 at ABSA's Calgary office, and September 28-29 in Edmonton.

Design Registration (2 days)

ABSA's Design Registration seminar starts where PESL leaves off, discussing the Safety Codes Act, the Pressure Equipment Safety Regulation, and CSA B51 in more detail as they are related to design registration. Some of the topics include the design survey process, requirements for different types of submissions, and common problems experienced by new submitters. The principles established by the legislation are reinforced through the use of case studies.

Sessions are planned for April 27-28 in Calgary, and November 1-2 in Edmonton.

Quality Systems and Inspection for Pressure Equipment Construction (3 days)

This three-day seminar covers the quality management system and inspection requirements established under Alberta legislation, focusing on the design of quality management systems, and inspection and documentation requirements related to pressure vessel construction. The final day consists of an extensive hands-on workshop where the group examines three sample vessels, working through the quality control documentation of one of the vessels in detail.

This seminar is held in person only, and sessions are planned for March 22-24 in Edmonton, and September 20-22 in Calgary.

Repair and Alteration (2 days)

This seminar uses ABSA's AB-513: Pressure Equipment Repair and Alteration Requirements document as its outline to facilitate a detailed discussion of regulatory requirements for repairs and alterations to pressure equipment in Alberta. It discusses applicable codes and standards, requirements for owner-users and for certified integrity assessment organizations, and documentation and certification requirements, and some of the unique requirements that apply to repairs of ASME Section VIII-2 pressure vessels.

Remaining sessions for 2022 include one in Edmonton on May 25-26, and one in Calgary on October 25-26.

An up-to-date schedule and online registration for in-person seminars are available at seminars.absa.ca. Until last year, these seminars have been available only in person, but ABSA has now established an online learning management system which provides for remote, on-demand learning, at lms.absa.ca. Current online offerings include the Pressure Equipment Safety Legislation seminar, the Regulatory Information for Power Engineers seminar, and complimentary recorded versions of the 2020 and 2021 Alberta Code Update seminars. ABSA also makes announcements with respect to seminars and other learning opportunities through its 'Seminars News' email subscription service, available on its webpage at absa.ca. ❖

Documents Issued by ABSA

The following documents issued by ABSA are linked below, and available at www.absa.ca.

2021-12-13 – *AB-525: Overpressure Protection Requirements, Edition 2, Revision 0*, was issued with major changes and clarifications to requirements for overpressure protection by means other than by pressure relief valves.

2021-12-17 – *IB21-020: Interpretation: Interpretation of Code Requirements in Paragraph UG-84 Relative to the Determination of the Number of Vessel (Production) Impact Test Plates Required*, was issued with updates and clarifications, and to account for a recently-published ASME interpretation.

2022-02-07 – *IB22-001: Responsibility for NDE During Pressure Vessel Fabrication*, was issued with minor updates and clarifications.

Other documents have been updated with editorial and other minor changes. ❖

Caution

Previous issues of The Pressure News may contain information which is outdated or no longer valid. Please be cautious when using information from old articles.

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