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## GENERAL MANAGER'S YEAR-END MESSAGE

ABSA has now completed a full operational cycle under the COVID-19 pandemic. It's hard to summarily describe the past 12 months. It wasn't a normal year, and we expect the next 12 months to be different than the last: not normal. Although we were prepared to start welcoming staff and visitors back to our offices in September, a 3<sup>rd</sup> wave of COVID-19 infections gained momentum in Alberta towards the end of the summer, and this initiative was delayed.

Certain adjustments to our service delivery that were originally thought to be only temporary have now become routine. Our employees have been working from home as much as possible, and mask use has been required in our offices for both employees and visitors, such as for examination candidates and seminar attendees. We continue to conduct some remote inspections and audits when it is appropriate to do so, and almost 100% of design submissions are received electronically. We also continue to offer examinations at reduced capacity, and have adjusted the schedule to suit the demand.

Our paramount focus continues to be the safety of the public, of ABSA employees, and of the people who work around pressure equipment on a daily basis. Despite the challenges of continuing to operate during the pandemic, industry stakeholders have been effective in maintaining the integrity of their equipment and ensuring the safety of their workers. This year, we received 125 unsafe condition, accident, and fire reports, with associated injuries to five workers. Unfortunately, one fatality was reported: a worker died during decommissioning of a plant, though the incident was not the result of a pressure equipment failure.

In terms of workplace safety, ABSA had zero lost-time or serious injury incidents and no vehicle accidents, and we have successfully renewed our 'Partners in Injury Reduction' Certificate of Recognition. ABSA also received recognition this year as one of the Canadian Business Review Board's 'Best Public Safety Services in Canada 2021', after receiving an independent nomination.

This year saw a slight increase in some areas of activity: fabrication inspection activities, and the number of received design survey submissions were both higher than the previous year, and serve as potential leading indicators of new growth in industry. We share in Alberta's optimism that strong and stable natural resource prices have begun to help bolster the province's economic recovery, and we have even started to recruit to fill additional technical positions to prepare for an increase in demand for our services.

In addition to its knowledgeable and skilled complement of staff, ABSA is very fortunate to have a dedicated and committed Board of Directors – their strategic guidance is very much appreciated by management and staff. With our stable, well-experienced workforce and the strong support of our Board, Alberta Municipal Affairs, the Safety Codes Council, and Alberta industry, ABSA is well-positioned to continue delivering its mandate in the years to come. With the conclusion of yet another unprecedented year, all of us at ABSA and our Board of Directors would like to take this opportunity to wish you all the best for this holiday season, and a healthy, safe, and prosperous New Year. ❖

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### 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.

## 2021 ALBERTA CODE UPDATE SEMINAR — AVAILABLE ONLINE

This year's Alberta Code Update Seminar was held in early October as a full-day online seminar via Microsoft Teams, with over 300 people in attendance. ABSA delivered material related to changes to recently updated codes and standards, including the 2021 edition of the ASME Boiler and Pressure Vessel Code, and the recently-published 2020 edition of the ASME B31.3 Process Piping Code. Additional presentations included a discussion of 'What's on the Horizon', giving an idea of some of the changes that might be expected in the pressure equipment industry in the next few years; a synopsis of ABSA's recently published AB-539: Engineered Composite Systems for Pressure Equipment Alterations document; and a synopsis of the upcoming 2<sup>nd</sup> edition of AB-525: Overpressure Protection Requirements. The seminar concluded with a brief walk-through of the new ASME Section XIII, which consolidates code rules for overpressure protection.

This year's seminar was made available at no cost to participants, and additionally the presentations were recorded and have been posted to ABSA's online 'learning management system' at [lms.absa.ca](https://lms.absa.ca). Persons who were able to attend the original event can sign up for the course on the learning management system and self-certify their attendance in order to obtain a certificate, while new students can obtain a certificate after watching the posted recordings. Students are able to download the handouts and have continued access to the recorded lectures for future review and ongoing reference. ❖

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## IPEIA 2022 CONFERENCE AND EXHIBITION

This winter, from February 28<sup>th</sup> to March 3<sup>rd</sup>, 2022, the International Pressure Equipment Integrity Association (IPEIA) will hold its annual conference and exhibition in person at the Fairmont Jasper Park Lodge in Jasper, Alberta. This winter's conference will commemorate the IPEIA conference's 25<sup>th</sup> anniversary as an internationally recognized event that gathers industry stakeholders from around the world, seeking to educate a workforce whose primary focus is on pressure equipment integrity and safety. In the past, typical conference attendees have included inspectors, engineers, academics, and manufacturers from the oil, natural gas, power generation, chemical, and forestry industries.

This year's conference in Jasper will focus on a typical array of technical presentations relating to pressure equipment integrity, with information and case studies relating to codes and standards, newly emerging inspection technologies and related software, and discussions of experiences, opportunities, and best practices. This conference will also see the return of the in-person exhibition, which will showcase integrity-related products and services and provide ample opportunities for education and networking.

IPEIA is continuing with its newly-adopted annual membership model, which offers learning and growth opportunities to its members throughout the year, and culminates with the in-person conference in Jasper. Registration for the conference is now open, with discounts available for annual members. Please visit <https://www.ipeia.com/registration> for more information or to register. ❖

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## ABSA BOARD OF DIRECTORS: UPCOMING VACANCY

ABSA is looking to fill an upcoming opening on its Board of Directors, for a board member representing the interests of Alberta's education sector.

ABSA's Board of Directors consists of senior representatives from various sectors of the pressure equipment industry and of the general public. Its members are trusted to provide guidance and oversight to ensure the organization remains sustainable and effective in its delivery of pressure equipment safety programs. The Board also provides strategic governance and insight into industry trends and expected changes that could have an impact on ABSA's mandate.

The ideal candidate for the upcoming position would be currently employed in a senior or executive position at an Alberta post-secondary educational institution. Previous governance experience either working with or serving on a board would be a strong asset. ABSA board members serve an initial three-year term, and have the option to serve an additional three-year term afterward.

ABSA's Board has regular meetings scheduled quarterly, with meeting locations alternating between Edmonton and Calgary. Although these positions are volunteer-based, an annual honorarium is paid to reflect their commitment, and board members are reimbursed for travel expenses relating to the attendance of meetings.

For more information or to apply for this position, please contact Jared Uditsky, ABSA's Human Resources Manager, by telephone at 780-437-9100, extension 3315; or by email at [hr@absa.ca](mailto:hr@absa.ca). ❖

## 2021 YEAR-END REVIEW OF ACCIDENTS

ABSA's mandate is to administer the Safety Codes Act and associated regulations, and to deliver safety programs as they relate to pressure equipment. Its ultimate quality objective is to prevent injury to people and damage to property arising from the operation of pressure equipment. When incidents do occur, a thorough investigation can help us to learn from past mistakes, decreasing the likelihood of repeating an accident. Unfortunately, this year, there were five injuries to personnel related to pressure equipment safety in Alberta:

- One worker was burned while draining a boiler, resulting in second-degree burns to their hand.
- One worker was injured while draining a de-sanding vessel, which was still pressurized due to a blocked drain. The worker's left arm was fractured when the drain piping rotated from the force of an unexpected pressure release.
- One worker received first-degree burns when hot condensate sprayed onto their legs while they attempted to adjust drain piping that had not been properly drained.
- One worker was burned when a portable flare stack unit overflowed with a flammable liquid and started a fire, resulting in third-degree burns over 80% of their body.
- One worker was burned while opening a manway when flammable process fluid escaped and ignited.

Equipment owners are reminded that Alberta law requires that unsafe conditions and accidents related to pressure equipment be reported in a timely manner. Information Bulletin [IB18-004 Rev 1: Reporting Unsafe Conditions, Accidents and Fires](#), clarifies the classification of incidents and their specific reporting requirements. ABSA also publishes a list of accident and incident summaries on its website; it can be found at [www.absa.ca](http://www.absa.ca) under the 'Unsafe Condition, Accident & Fire Reporting' menu, by navigating to '[Summary of Unsafe Condition, Accident & Fire Reports](#)'. ❖

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## ASME CODE, 2021 EDITION: IMPLEMENTATION IN ALBERTA

This year's 2021 Edition of the ASME Boiler and Pressure Vessel Code introduced significant changes, in particular with respect to requirements established by Section VIII-1 for manufacturers to ensure that pressure vessels are designed with "responsible oversight" by a specifically designated and suitably qualified design person. The new code edition also establishes that qualification requirements for design personnel and for documentation of those qualifications be described by manufacturers in their quality control systems. This may represent a significant change for some ASME Section VIII-1 vessel manufacturers, who are thus required to establish suitable procedures and to document them in their integrity management systems before the new code edition becomes mandatory at the start of the New Year.

ASME Section VIII-1's newly published Mandatory Appendix 47 establishes in its first paragraph that a manufacturer of a pressure vessel needs to designate a designer, engineer, or Certifying Engineer to be in "responsible charge" of the design for that vessel. The appendix then goes on to establish qualification requirements for each of these classes of personnel, gives basic education and experience requirements for each, and in some cases establishes alternative requirements and provisions for manufacturers to override and establish their own requirements. For designers and engineers, the appendix establishes limitations on the types of design activities that can be carried out without additional qualifications and experience, though these limitations do not apply to Certifying Engineers.

Although the Safety Codes Act provides the pathway for a revised edition of a code that is adopted by a regulation to become mandatory a year after it is published, the ASME Code itself stipulates that a new published edition becomes mandatory only six months after publication. ASME Section VIII-1 vessel manufacturers that maintain an ASME Certificate of Authorization are required to maintain compliance with the stricter requirements of the ASME code, and full compliance with the new edition thus becomes mandatory six months after its publication, on January 1, 2022. For equipment which is not marked with an ASME Certification Symbol and made by a manufacturer that does not maintain an ASME Certificate of Authorization, full compliance with ASME rules is often still required by the manufacturer's integrity management system, or by contract with the purchaser.

ABSA held a live 'Appendix 47' information session in late August discussing these new requirements in detail, and also gave an overview during the 2021 Alberta Code Update Seminar held in October. Both of these events were recorded and are available for review at no charge on ABSA's online learning server at [lms.absa.ca](http://lms.absa.ca). Questions and other requests for further information about these changes can be directed to an Authorized Inspector, or can be sent to ABSA's Technical Advisory Group by email at [tag@absa.ca](mailto:tag@absa.ca). ❖

## SIGNIFICANT ERRATA PUBLISHED FOR ASME SECTION II, PART D

Two relatively long erratum documents have been published on ASME's website, providing extensive corrections to Section II, Part D of the recently-published 2021 Edition of the ASME Boiler and Pressure Vessel Code. Section II-D is used extensively by other code sections, which typically refer to it to prescribe allowable stresses for various materials used in design. The recent errata consist of separate documents for the metric- and customary-unit versions of Section II-D, each constituting dozens of pages. The corrections outlined in these errata include changes that pertain to commonly-used nonferrous alloy materials, and despite that some manufacturers make seldom use of such materials, code users need to ensure that they are aware of the content of published errata, and that they will not make inadvertent use of a portion of a code or standard that has been made obsolete through the publication of an erratum.

Rather than introducing brand new concepts or other major changes that are often seen with the publication a new edition, errata are published separately to outline corrections to an existing publication, with the intention of clarifying the committee's original intent for the document. They are often used to apply changes that were agreed upon by the committee but missed in publication, to adjust incorrect or ambiguous wordings that do not reflect the committee's intention, to correct layout errors, or to make other important typographical or editorial corrections. Since errata represent the committee's original intent for a published edition, the changes they introduce are considered to be of an urgent nature; as such, they tend to be published openly as soon as they are available, and become effective immediately upon publication.

Although it can be a challenge to manage changes as extensive as those outlined in the recent Section II-D errata, it is important that they be handled in a way that enables all code users to be alerted to changes if they refer to an affected portion of the code. One common and recommended practice is to ensure that one or more people have the assigned responsibility of subscribing to and reviewing errata notices as soon as they are published; the assigned individuals would typically alert technical staff about important changes, and would ensure that circulating copies of the original documents are marked up with references to the corrections.

It should be noted that ABSA does not undertake to routinely inform the public about the release of new errata; responsibility for awareness, communication, and implementation of code corrections lies with all code users. Missing a correction that has been made to a published code can have a potentially severe impact on project schedule or budget, and can introduce reliability and safety concerns if equipment is allowed to be placed into service. For the ASME Boiler and Pressure Vessel Code, errata are published on ASME's website, and are easy to find by searching the web for "ASME errata." Errata for the various code sections can then be browsed and downloaded at no charge, and users are given the opportunity to subscribe to receive notifications of future errata by email for each individual code section. ❖

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## 2021 ALBERTA CHIEF POWER ENGINEERS EDUCATION CONFERENCE

The Alberta Chief Power Engineers Education Conference Committee recently held its sixth annual conference, on October 27<sup>th</sup>, 2021. After having cancelled last year's conference due to the pandemic, the committee made the decision early in the year to run this year's event virtually. This year's program included seven technical and business presentations, and the conference had approximately 60 people in attendance.

Some of the topics presented this year included:

- The Future of Energy
- ABSA Update
- Corrosion Control in Boiler Feedwater Systems
- Ion Exchange Resin Testing, and Interpretation of the Results
- Fueling Success Through Human Performance
- Changes to the Energy Landscape: Hydrogen
- Digital Technology: Operational Efficiency and Cost Savings Case Study

The topics this year were selected based on feedback obtained from attendees at previous conferences. The conference also included two keynote speakers, who discussed the future of energy and associated job prospects for power engineers, and human performance. Expectations for the future use of hydrogen were also explored, with discussion of plans for a natural gas blending program that one Alberta company intends to implement in the coming years.

The conference planning committee was pleased to have been able to get back to its goal this year of delivering a top-notch program. Feedback received from attendees indicated that despite not being able to meet in person, the committee's goal was achieved and the conference was a success. It is hoped that by October of 2022, the situation may better suit in-person attendance of next year's conference. ❖

## INITIAL LOOKS AT GLOBALIZATION

As globalization has steadily increased in the 21<sup>st</sup> century, the circulation of personnel and products from international markets has become more frequent. Alberta's pressure equipment industry has not been an exception, as there has been a steady increase over the years in the proportion of pressure equipment imported from overseas. Some of the important differences that have been noted in jurisdictions outside of North America are the employment of a performance-based approach to design, rather than the rules-based approach used by many of Alberta's adopted codes and standards; and the accommodation of new technologies and fabrication processes that have been used in other countries. There is already a notable trend of codes and standards moving towards a performance-based approach to design, and it is further understood that some Alberta owners could develop an interest in referring to alternative codes and standards in establishing specifications for their equipment, rather than sticking to the codes and standards that are directly adopted by the Pressure Equipment Safety Regulation and CSA B51.

ABSA is taking initial steps to better understand the types of systems that are in place and working well in other parts of the world. As a part of this effort, Mr. Djordje Srnic, ABSA's Manager of Codes and Standards and Assistant Chief Inspector, presented a paper at the European Symposium on Pressure Equipment, in Paris, France, with the aim of introducing CSA B51 to the international community. One of the aims of this presentation was to help other jurisdictions understand how this standard has been used successfully in Canada to harmonize some aspects of Canada's otherwise separate provincial jurisdictions. The title of the paper was, 'Overview of the CSA B51 Code and Canadian Requirements in Pressure Equipment Discipline'.

Based on feedback obtained at the European symposium, ABSA is working to establish an international forum between Canadian and European manufacturers, owners, regulatory organizations, and standards development organizations, enabling them to share information about the technologies and processes being used on either side of the Atlantic. The forum will meet to discuss the systems that are in place, to explore ways to make the pressure equipment safety programs of different jurisdictions more compatible with each other, and to support the elimination of barriers to trade while not sacrificing standards for safety. Forum meetings will be held remotely, and are expected to start during the first quarter of 2022; stakeholders that would like to participate can contact ABSA's Technical Advisory Group by email at [tag@absa.ca](mailto:tag@absa.ca) for more information. ❖

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## ISO 9001:2015 RECERTIFICATION AUDIT

After having implemented an ISO 9001:2015 quality management system and receiving independent certification for it in 2018, ABSA is pleased to announce that it successfully completed its first recertification audit in November. The audit was conducted remotely via Microsoft Teams, and identified several opportunities for improvement but no non-conformances.

ISO 9001 is a standard that establishes a framework and basic requirements for organizations of all types to document and implement a quality management system. This allows them to formally describe how the most critical elements of their business work and interact with each other, establishing a strong framework for continuous improvement, and allowing them to ensure consistent quality in their delivery of products and services. They are commonly implemented by organizations around the world, and are especially useful in cases where an organization needs to provide evidence of having implemented such a system to their customers or to regulators, through the use of certificates issued by third parties.

Although implementing an ISO 9001 quality management program is not mandatory for pressure equipment programs within Alberta, it is the most common standard that is used internationally by organizations that manufacture pressure fittings for use in Canada. Such organizations typically submit proof of having implemented an ISO 9001 quality management system as a part of their pressure fitting design submission, in order to satisfy the requirements of CSA B51 and of Alberta legislation for fittings manufactured outside of Canada. ❖

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## NO FEE INCREASE FOR 2022

ABSA is not planning any changes to the fee schedule for 2022. The current fee schedule is posted on the website at [www.absa.ca](http://www.absa.ca), under the heading 'Fee Schedule'.

ABSA is a self-sustaining not-for-profit organization. It recovers its costs through revenue generated by fees charged to customers, and places high importance on ensuring value-for-cost. Fees are necessary to ensure the operational effectiveness and sustainability of the organization, and ABSA is committed to giving its best effort with respect to the effective delivery of pressure equipment safety programs in Alberta. ❖

## DOCUMENTS ISSUED BY ABSA

The following documents issued by ABSA are linked below, and available at [www.absa.ca](http://www.absa.ca).

2021-10-01 – *IB21-007: New Format Performance Qualification Cards*, was issued to introduce new-format, plastic procedure qualification (PQ) cards for welders and welding operators that successfully pass a welding test administered by ABSA.

2021-10-20 – *IB21-008 (VA20-007): Variance to Qualify to Take a 3rd Class Power Engineering Examination*, was issued to continue to permit 3<sup>rd</sup>-class power engineering students to challenge 3<sup>rd</sup>-class power engineering examinations, without holding a 4<sup>th</sup>-class certificate as required by the Power Engineers Regulation.

2021-10-29 – *AB-505: Risk-Based Inspection Requirements for Pressure Equipment, Edition 3, Revision 0*, was issued with new provisions for risk assessment of PRV intervals that are not fully quantitative, and other minor changes throughout.

2021-11-18 – *AB-519: Pressure Piping Alternative Test Methods: Procedure Requirements, Edition 2, Revision 3*, was issued to provide consideration for new provisions in ASME B31.1 for alternatives to hydrostatic testing.

2021-10-29 – *AB-538: Integrity Management Systems for Mechanical Refrigeration Systems Containing Ammonia, Edition 1, Revision 1*, was issued with updates to the guidance notes provided to owners for operation.

2021-11-10 – *IB21-013: Interpretation: Owner's Designation of Chief Power Engineer for Rotational Duty Assignments*, was issued to provide guidance with respect to sharing of duties between chief power engineers on rotational duty assignments, such as for those on worksites working on a 7-day-on / 7-day-off arrangement.

2021-11-10 – *IB21-016 (VA21-008): Variance to Provide for Renewal of Building Operator A and Similar Certificates of Competency*, was issued to reaffirm and extend provisions for renewing a 'Building Operator A', 'Building Operator B', or 'Fireman' certificate of competency.

2021-11-29 – *AB-524: Pressure Relief Devices Requirements, Edition 7, Revision 0*, was issued with minor updates and changes throughout.

2021-12-01 – *AB-535: Requirements for Alteration Design Registration Based on Fitness-for-Service*, was issued with editorial revisions throughout.

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

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