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ABSA'S 20TH ANNIVERSARY EVENTS

On April 1st 2015, ABSA celebrated its 20th year of operation. This occasion was commemorated with events on May 25th in Calgary and May 26th in Edmonton. It was both an honor and a pleasure to mark this anniversary with our stakeholders. We were pleased to welcome customers from all of our programs, past and present board members, members of the Safety Codes Council, and ABSA staff and retirees. We look forward to continuing to work with all of our partners to achieve our vision of being a leader in pressure equipment safety. ❖



Left to right: Mr. M. Poehlmann, Administrator and Chief Inspector; Mr. R. Noonan, Safety Codes Council Board Member; Mr. G. Campbell, General Manager; Mr. M. Demchuk, ABSA Board Member.

EDUCATION CONFERENCE DESIGNED FOR CHIEF POWER ENGINEERS

The first annual Alberta Chief Power Engineer Education Conference will be held in Edmonton on Wednesday, September 23, 2015. The conference registration form and more information are available at www.absa.ca. This conference is designed to update you on your responsibilities under the Power Engineers Regulation. The conference topics are:

- Introducing the new Plant Registry;
- Understanding the AB-528 (requirements for reduced supervision);
- The purpose of temporary certificates;
- Preparing for an ABSA audit;
- Chief and Shift Power Engineer duties and responsibilities;
- New electronic examinations;
- Electronic logbooks;
- Roles of Chief Power Engineer and Chief Inspector;
- Fired Process Heater Operator certification;
- Development of power engineering examination questions;
- Qualifying experience for power engineers.

If your organization would like to sponsor this event, please contact Kristy Martin at martin@absa.ca. ❖

CODE UPDATE SEMINAR

ABSA will be presenting the annual Code Update seminar in October. This full-day information session will detail the latest in legislation requirements and adopted codes and standards for pressure equipment and how some of the changes may affect pressure equipment designers, quality control personnel and other industry members. The preliminary agenda includes overview of changes in the design survey and registration process; changes in the Safety Codes Act and regulations; upcoming changes in the Codes and standards; summary of changes in new editions of (i) ASME Boiler and Pressure Vessel Code, (ii) ASME B31.3 Process Piping Code, and (iii) CSA Z662 Oil and gas pipeline systems; overview of revised data report forms (e.g. AB-25) for pressure vessels; and overview of newly published or revised Information Bulletins and some AB-500 series documents. The agenda for the Code Update seminar will be posted soon – check www.absa.ca for details.

Edmonton: October 09, 2015 at Four Points by Sheraton Edmonton South
Calgary: October 16, 2015 at Best Western Port O'Call

The Seminar Registration Form (AB-136) is available online at:
<http://www.absa.ca/Forms/AB-136%20Seminar%20Registration%20Form.pdf>

Please contact training@absa.ca for additional information.

The Code Update Seminar is one of ABSA's more popular seminars and seating is limited. Early registration is recommended. ❖

PRESSURE TACK WELDERS

A Pressure Tack Welder Certificate of Competency was established in the Pressure Welders Regulation on October 01, 2014. Permanent tack welds, deposited for use in the welding of pressure equipment, will require the use of a qualified pressure welder or pressure tack welder.

Certificate holders, that intend to use pressure tack welders, will need to modify the quality management system (QMS) that they have registered with ABSA. The QMS must include *the processes for managing the supervision and development of individuals performing tack welding* and a procedure to permit inspectors to verify that tack welds that remain in place were made by a qualified welder.

Certificate holders, that do not intend to use pressure tack welders, will not need to modify their QMS. Also, certificate holders, who only deposit temporary tack welds, do not need to modify their QMS.

Please refer to the ABSA website for information bulletins IB14-010, Interpretation Permanent Tack Welds, and IB13-013 Rev.2, Interpretation Temporary Tack Welds. ❖

GUIDANCE ON THERMAL LIQUID HEATING SYSTEMS

The Safety Codes Act defines a Thermal Liquid Heating System as pressure equipment *in which a thermal liquid that is not pressurized by the application of a heat source is used as the heat transfer medium and includes one or more heaters and any connected piping system or vessels.*

Thermal liquid heating systems (TLHS) may not always be thought of as pressure equipment and the rules and requirements may be misunderstood and applied inconsistently. We understand that TLHS were added to Alberta legislation as pressure equipment after a fire incident, many years ago. The Safety Codes Act and regulations contain specific provisions related to this equipment due to the inherent fire hazard involved with the equipment.

In an effort to eliminate further misunderstanding, an information document is currently under development that will form the basis of a guidance document for the design, fabrication, installation, operation and maintenance of thermal liquid heating systems based on the current regulatory framework. The development of the document will be based on information provided by subject matter experts from industry, and from ABSA's Education & Certification, Design Survey and Inspections departments.

The Pressure Equipment sub-council will be asked for input on the development of the guidance document. At the conclusion of the review and consultation process, the guidance document will be published and made available on the ABSA website.

Tentatively, this document may be available by June 2016. ❖

AUDIT-BASED DESIGN REGISTRATION

Both the pressure equipment industry in Alberta and ABSA recognize that there is a need to improve the design registration process. In April, Design Survey started a pilot project to develop a design registration program based on audit principles for submissions made by a “recognized design submitter” (RDS) from a “recognized organization”.

Our current design registration process applies the principles of quality control, which is making sure that the designs submitted are in compliance with the codes and regulations. The current process is product (design) oriented and we need to perform deep and detailed examination on each design to ascertain whether or not the design is acceptable for registration. The current process requires a lot of resources (time and trained personnel), does not provide an efficient application of the design registration program, and creates frustration for submitters and for ABSA.

With the new audit-based process, the intent is to introduce quality assurance at the source of the designs submissions. That will provide increased safety, efficiency, sustainability and satisfaction with the process of design registration. This will also serve as a tool for all of the design submitters who are identified as having a high level of successful submissions but unnecessarily bear the consequences of delayed registration due to a large number of non-compliant submissions which are clogging the system.

The pilot project was started by meeting with selected Alberta-based pressure vessel manufacturers. The purpose of the meeting was to present the idea, and ask for opinion and help from industry in developing a process of design registration based on audit principles instead of detailed survey.

The following process was presented to the Industry participants. This is a process which is to be based on three cornerstone items, which shall be documented and provided to ABSA by the participant organizations:

1. Competent person in design and submission of pressure vessel designs in accordance with Alberta requirements. Such person will be nominated by the organization as Recognized Design Submitter (RDS) for the intent of registration under the audit-based process.
2. Clearly defined and limited scope of competencies of the RDS documented and submitted to ABSA for acceptance. Periodic evaluations may be performed by ABSA.
3. Design creation and documentation preparation procedures/processes established by the organization providing for defect free design submissions. Such procedures/processes are part of the Quality Management System and shall be auditable.

All of the participant industry members expressed enthusiasm and great support for the proposal. Industry participants are of the opinion that this proposal is welcome and that ABSA has full support and cooperation from industry in this pilot project, and believe that the outcome will be beneficial for all involved parties. The goal of the pilot project is to develop, test and refine the audit-based process with the intention of making the program widely available. The final version will be ready for sign off in October. ❖

REQUIREMENTS FOR THE USE OF ENGINEERED PRESSURE ENCLOSURES

An engineered pressure enclosure (EPE) is an enclosure constructed and installed, for the purpose of stopping a leak, for a limited period of time until a proper repair can be scheduled. Installation of an EPE is a temporary alteration to the pressure equipment and the design of the EPE must be registered before installation.

ABSA is developing a document, “Requirements for the Use of Engineered Pressure Enclosures”, which will define Alberta requirements that must be met for the use of an EPE. ABSA met with owners of pressure equipment and with manufacturers of EPE where we discussed the use of EPE, related issues and how to improve the current process. This new document is expected to enhance the process of design and procedure registration. The enhancements will allow the process to be streamlined for common applications of EPE.

Once the document is developed, ABSA will request feedback from industry and will consult with other Canadian Jurisdictions to consider consistency and uniformity. ABSA expects that this document will be published in the fall of 2015. ❖

ABSA'S WEBSITE IMPROVEMENTS

ABSA is working to upgrade www.absa.ca. The website will be on an updated platform with an improved search engine. We expect this upgrade to be launched early in the summer of 2015. Watch the website for more details. ❖

NEW EDITIONS OF CODES

The 2014 Edition of ASME B31.3 *Process Piping Code* was issued in February 2015. We would like to bring to your attention two significant Code changes that were introduced in the 2014 Edition of ASME B31.3 Code. New Table 331.1.3 provides exemptions to mandatory PWHT requirements allowing the PWHT of P No. 1 (all groups) materials to be non-mandatory for any material thickness of the welds under certain conditions. Even though Table 331.1.1 provides requirements for PWHT holding time and temperature, under the new B31.3 Code Edition, P1 materials thicker than 1 inch are not required to be PWHT if preheat is applied in accordance with new Table 331.1.3 and multiple layer welds are used. As a second significant change, paragraph 342 now requires that companies, that did not work to a written practice, must now produce a written practice for performing non-destructive examinations.

According to the information from CSA, the 2015 Edition of CSA Z662 - *Oil and gas pipeline systems* is currently in the final publication stage and is scheduled to be published at the end of June 2015. Major changes are expected to be in Clause 14. This Clause will be renamed to "Steam distribution pipelines and high temperature pipelines". A steam distribution pipeline will be one with a design temperature exceeding 120°C in an oilfield thermal recovery scheme that conveys steam from a steam generation facility to steam injection wells / well pad facilities and a high temperature pipeline will be any pipeline with a design temperature exceeding 230°C. The revised Clause 14 will specify requirements for the both steam distribution pipelines and high temperature pipelines.

The 2015 edition of the ASME Boiler and Pressure Code is scheduled to be issued on July 1, 2015. Numerous changes are expected to all sections of the Boiler and Pressure Vessel Code. More details will be available after the publication of the code, and we are planning to inform you about major changes.

For all three above mentioned new editions of the Codes, we are planning to summarize the changes and present them during the Code Update Seminar in October 2015.

In addition, we would like to inform you that CSA is planning to issue the 2015 editions of CSA B149.1 *Natural Gas & Propane Installation Code*, CSA B149.2 - *Propane Storage & Handling Code*, CSA B149.3 - *Code for the Field Approval of Fuel-Related Components on Appliances & Equipment*, and CSA B149.5 - *Installation Code for Propane Fuel Systems & Tanks on Highway Vehicles*, in August 2015. ❖

CHANGES TO POWER ENGINEERING CERTIFICATES OF COMPETENCY

In the Power Engineers Regulation, AR 85/2003, certified individuals are called "power engineer" while the wording on the certificates referred to them as "engineer". For 1st through 5th Class, the revised certificates will use the term "power engineer" to align with the Regulation. For example, the revised wording will say "**First Class Power Engineer's**" rather than "**First Class Engineer's**" as on the current certificates. Although the Power Engineers Regulation uses numerals to describe certificate classes, the classes on the certificates will continue to be spelled out rather than using numerals to define the class.

The wording on the certificate describing the power engineer's authority will be revised to a general statement about the holder being certified in accordance with the Regulation, rather than stating the partial scope of authorization as has been the practice. For 1st through 5th Class, Special Boiler Operator and Special Oilwell Operator, the wording on the revised certificates will now say:

has satisfied the requirements of the Power Engineers Regulation under the Safety Codes Act and is hereby issued this certificate of competency.

The holder of a certificate of competency, issued under the Power Engineers Regulation, is limited to the authorized scope of practice permitted by the Regulation.

These changes have no effect on the scope of practice, authority, or responsibilities under a current valid certificate. A previously issued certificate will continue to remain valid so long as the certificate is renewed in accordance with the Power Engineers Regulation. ❖

PRESSURE EQUIPMENT SUB-COUNCIL (PESC)

The Safety Codes Council has changed the name of the *Boilers & Pressure Vessels Sub Council* to the *Pressure Equipment sub-council*. The original name was *Boilers & Pressure Vessels Technical Council*. ❖

STAINLESS STEEL FLEXIBLE EXPANSION BELLOWS RUPTURES

A propane refrigeration plant was in operation for years with no incidents. The system consisted of a propane suction scrubber and a single block valve on the suction line to isolate the compressor. Operations requested to have a double block and bleed valve installed to increase the safety when isolating the compressor for maintenance.

Double block and bleed valves were installed on the suction side of the propane refrigeration compressor, which created significant fit up problems due to piping misalignment. In order to correct the problem, the suction piping was modified to include a stainless steel flexible bellows to alleviate the piping alignment problems. The flexible bellows was installed and was found to be leaking as soon as the piping system was purged and pressurized. The flexible bellows was returned to the supplier for repairs. The bellows was re-installed and operated without incident for months.

During a regularly scheduled shutdown of the refrigeration system, the ice that had built up over time on the non-insulated stainless steel expansion bellows melted, allowing the bellows to fail catastrophically. As a result of the failure, propane gas filled the building setting off the gas detector and shutting down the other equipment. Fortunately, there was no fire and the system was isolated.

Results of the Investigation

Findings from the subsequent investigation showed that the flexible expansion bellows was not suitable for pressure service and failed as a result of over pressure. The flexible bellows manufacturer stated that the fitting was intended as an atmospheric engine exhaust connector expansion bellows and was not intended to be used in pressurized service.

It is important to have and follow a Management of Change (MOC) process. Part of the MOC is to ensure that pressure piping is designed, constructed and installed in accordance with requirements. Design must meet the code of construction and pressure piping components must be registered for the service. ❖

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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.

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