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EXPECTED CHANGES TO ASME CODE IN 2017

Significant changes are expected to be introduced in the 2017 edition of the ASME Boiler and Pressure Vessel Code. Members of ABSA's Technical Advisory Group and Design Survey team have been studying expected changes as code publications are being finalized for expected release in July.

The most important changes are expected to occur in ASME *Section I: Rules for Construction of Power Boilers* and to ASME *Section VIII-2: Alternative Rules for Construction of Pressure Vessels*. Section I is expected to include new provisions allowing boiler proper components to be designed and constructed to Section VIII-2. Section VIII-2 is expected to introduce the concept of 'Class 1' and 'Class 2' vessels, with 'Class 1' vessels having a higher safety factor on ultimate tensile strength in exchange for reductions in documentation, design, and construction requirements.

Another major concept is ASME's 'PRT' designator and associated Certificate of Authorization, which can be issued to permit an organization to construct code equipment parts without assuming design responsibility. The 'PRT' designator was introduced into Sections I and IV in the 2015 edition, and is to be introduced in the 2017 edition of Section VIII.

It should be noted that the Safety Codes Act indicates that if a code is adopted by a regulation "as amended from time to time", then any amendment or replacement to that code automatically comes into force approximately one year after publication, unless an order is made by the Minister. The codes and standards declared in force under section 6 of the Pressure Equipment Safety Regulation are introduced in this manner, and so it should therefore be noted that even when specific editions are called out in the regulation, newer editions will come into force as provided for in the Act.

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Readers are reminded that ABSA puts on a code update seminar each year in the fall, at which attendees are presented with a summary of major changes to codes and standards as they are applicable to Alberta. The agenda for the 2017 seminar has been drafted, with the bulk of it comprising overviews of changes to the 2017 editions of ASME Sections I, IV, VIII-1, VIII-2, and IX, to the 2016 edition of ASME B31.3. A portion of the morning will be dedicated to a case study workshop to contrast code requirements for a vessel when it is designed and constructed to Section VIII-1, Section VIII-2 Class 1, and Section VIII-2 Class 2. Additional topics will include changes to ABSA publications and expected changes to future editions of the codes and standards.

The seminar is to be presented in Calgary, Red Deer, and Edmonton in October, and more information can be found on our website at <http://www.absa.ca/seminars/course-listing/>. ❖

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.

NEW GRADE B PRESSURE WELDER DIRECTORY

ABSA has launched a new directory for Alberta Certified Grade B Pressure Welders. This online directory provides the information of a pressure welder's name, file number (W), and Grade B Certificate of Competency issue date. ❖

SUMMER HEATING PLANT MAINTENANCE

Although the summer season is soon arriving and preparing equipment for winter may be one of the last things on our minds, this season actually provides an ideal window for owners and operators to undertake inspection and maintenance of their heating plants to ensure that they are ready for the next cold-weather season.

Heating plants are comprised of critical components that need to be inspected regularly in order to ensure their continued safe and reliable operation. Inspections need to be undertaken by a competent person or contractor, and need to include an assessment of the pressure relief valve, the low-water fuel cut-off switch, pressure and temperature switches, burners, burner controls, fresh air intake into the boiler room, and any circulating or boiler feedwater pumps. Manufacturer's recommendations for periodic inspection and maintenance are typically a valuable reference.

ABSA publishes some related resources on its website, in particular, [AB-506: Inspection & Service Requirements for In-Service Pressure Equipment](#), available by searching for "AB-506" on our website. A pamphlet is also available entitled *Safe Operation and Care of Heating Boilers*, available at your local ABSA office or upon request to your Authorized Inspector. ASME publishes several additional useful reference documents, including Section VI of the ASME code, *Recommended Rules for the Care and Operation of Heating Boilers*, and ASME CSD-1, *Controls and Safety Devices for Automatically Fired Boilers*. ❖

HOT WATER STORAGE TANK ACCIDENT IN ST. LOUIS, MISSOURI

A fatal accident occurred at a box factory in St. Louis, Missouri in the United States on April 4, 2017. At approximately 8:00 AM, a 1300-kilogram storage tank launched itself through the roof of the factory, crashing through the roof of a laundry facility 150 meters away. Three workers were killed, and four others were injured – most of the casualties occurred at the laundry facility where the vessel landed. Although initial reports referred to a "boiler explosion," the US Chemical Safety Board (CSB) has concluded that the condensate storage tank was the source of the explosion.

According to initial calculations performed by CSB investigators, the pressure vessel contained about 510 gallons of water and was operated at 100 psi, and at a temperature above the water's atmospheric-pressure boiling point. Loss of containment resulted in a boiling liquid expanding vapor explosion ("BLEVE"). When the vessel failed, the sudden reduction to atmospheric pressure allowed a large amount of the super-heated water to rapidly expand to steam, forcing the contents out through the bottom and launching the vessel shell through the building roof. Initial estimates indicate that the vessel propelled itself with a speed of almost 200 kilometers per hour and spent more than 10 seconds in the air before crashing into the laundry facility.

Although dramatic and tragic incidents like this do not occur frequently, their occasional occurrence serves as a reminder of the nature of the equipment our industry works with and the associated safety risks, especially when improperly operated or maintained. ❖

DESIGN SURVEY QUALITY PLAN INFORMATION SESSIONS

ABSA is providing free information sessions to Alberta-based companies that are interested in participating in the Quality Plan (QP) program for expedited design registration of some types of vessel and piping submissions. This program provides an alternative submission process, allowing participants to designate competent individuals within their own organizations to provide a detailed additional review of simple vessel and piping designs before they are submitted. Registration then occurs on an expedited basis, and continued participation in the program is justified by periodic audits of packages submitted by each designated individual.

The information sessions will be 2-3 hours in length and will serve to more thoroughly introduce the programs to prospective participants. Some history behind the development and implementation of the programs will be presented, along with information about eligibility and participation, and successful implementation of the programs.

An information session will be held at 8:30 am on July 12, 2017 in Edmonton, and a corresponding session will be held in Calgary at 8:30 AM on July 14. Those interested in attending one of these sessions can email the training department at training@absa.ca with the number of attendees and contact information for each. ❖

PLANT REGISTRY

In 2014, in response to our stakeholders' requests, ABSA began developing a plant registry. With more than 8,750 of an estimated 10,000 plants in the province, the registry is expected to be completely populated by the end of October. Each plant in the registry has been assessed by an ABSA safety codes officer and capacity-rated in accordance with the Power Engineers Regulation.

The purpose of the registry is to make needed information available to the owner and to supervising personnel. The recorded plant rating is used as a convenient reference to determine the required type of supervision, and the certification class for supervising power engineers. An in-house record of plant ratings also simplifies the reporting of operating experience ("firing time") needed for operators to progress to the next level of certification, simplifying the examination application process.

The registry database is maintained by ABSA and each record contains the original assessment of the plant's rating, a history of updates provided to the Owner, and the current status of registered equipment. Registry documents issued to plant owners contain all the information needed to determine the supervision requirements of the plant. A first document contains the plant type and rated capacity, and indicates the required qualifications for operating personnel. A second document contains a listing of the equipment that is associated with the plant registration. Since this information is accessible by ABSA, it provides a common reference to be used in discussing registered plant equipment and supervision requirements with ABSA staff. ❖

WAKE UP AND LEARN MICRO-SEMINARS

ABSA is excited to announce that our first micro-seminar, "Wake Up and Learn: Steam Distribution Pipeline Systems," was a fantastic success.

This first of a series of short-format, early-morning seminars was announced on our website and through our email distribution list in early February. It covered various aspects of steam distribution pipelines that are designed and built to CSA Z662 Clause 14. The discussion covered materials, fabrication, welding, installation, inspection, and testing, with a focus on the requirements as they are applicable in Alberta.

Due to unexpectedly high demand for this first seminar, plans are underway to repeat the topic for a Calgary audience in the coming months. A second micro-seminar is being developed and is expected to cover variances, information bulletins, and AB-500 publications. Future topics have not been set, but will be based on expressed demand and suggestions received from industry.

"Wake Up and Learn" micro-seminars include a full, hot breakfast served early in the morning, giving attendees the chance to connect with some available members from the ABSA management team. After breakfast, the presentation is intended to fill a half morning, providing time for collaboration and discussion, and engaging participants by means of in-seminar activities.

If you missed this first seminar and would like to be kept informed for future seminars, please consider signing up for our electronic distribution list under the 'eINFO' section of our website at www.absa.ca, as described below

What are some advantages of attending an ABSA "Wake Up and Learn" micro-seminar?

- Learn directly from ABSA subject-matter experts
- Meet peers from other organizations working in similar environments
- Improve your knowledge, share best practices, and learn from others
- Micro-seminars are designed for "hot topics" trending in the pressure equipment industry
- Micro-seminars are held in the morning, allowing you to get back to work before lunch
- In-seminar activities and assignments help you to assimilate and apply new knowledge ❖

SUBSCRIPTIONS TO ABSA'S EINFO SERVICE

Readers are reminded that they can subscribe to ABSA's eINFO service on our website at <http://www.absa.ca/home/absa-information/subscribe-to-newsletter/>. In order to comply with Canada's anti-spam legislation, some email addresses may have had to be removed from our distribution lists. If you have not been receiving wanted information about ABSA's programs and services, please consider subscribing.

Subscribers to The Pressure News will no longer automatically receive emails with news pertaining to upcoming seminars, as seminar information has now been separated into its own subscription category. If you are interested in receiving the most up-to-date information on upcoming seminars, please sign up for eINFO and specifically choose the 'Seminar Information' selection box that has been made available. ❖

2017 CHIEF POWER ENGINEERS CONFERENCE

The Alberta Chief Power Engineers Education Conference Committee is holding its 3rd conference at the Delta Hotels by Marriott Edmonton South Conference Centre on September 26, 2017.

Chief Power Engineers and persons in charge of a plant (e.g., power plant, heating plant, or thermal liquid heating system) are invited to attend and can invite one other person to attend with them. Approved power engineering training providers (e.g. colleges, institutes who teach power engineering) are also invited to attend.

Topics for this year's conference include:

- ABSA Overview
- AB-533: Power Engineering Course Acceptance Criteria
- Plant Registry
- Repair of a Steam Locomotive
- Incident Case Study
- Open Mic with the Administrator
- Operational Excellence
- Recent Failures: What / When to Report to ABSA
- Pressure Equipment Integrity Management Systems: What / Why / How, and Common Audit Findings
- Chief Engineer vs. Chief Inspector
- New Pressure Equipment Technology

Please visit www.absa.ca for the registration form, and information for those who would like to become a conference sponsor.

ABSA will be presenting a pre-conference seminar, "Regulatory Information for Power Engineers," on September 25. Information about the seminar can be found on the ABSA website. ❖

DOCUMENTS ISSUED BY ABSA

The following documents issued by ABSA are available at www.absa.ca.

2017-02-01 - AB-521, *Requirements for Engineered Pressure Enclosures*, Edition 1, Revision 1, was issued with general revisions throughout.

2017-02-24 - AB-270, *General Engineering Requirements for the Use of Engineered Pressure Enclosures*, and the associated AB-270a, *Guide for Completing AB-270*, were issued to provide a standardized form for submission of engineered pressure enclosure installation procedures.

2017-03-08 - IB17-003, *Interpretation: Power Engineers Regulation Subsection 15(5) Practical Examination for Renewal of Special Steam-Powered Traction Engine Operators Certificate of Competency*, was issued to introduce the examination described in AB-240 as one that is "satisfactory to the Administrator," as required by the regulation.

2017-03-22 - *Notice: Copies of Registered Designs May Be Returned Electronically*, was issued to introduce plans to return copies of registered designs electronically, in some cases for submissions that were not received electronically.

Other documents have been updated with editorial corrections only. ❖

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