ABSA
the pressure equipment safety authority

THE PRESSURE NEWS

Volume 24, Issue 2, June 2019

IN THIS ISSUE:

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Previous issues of The Pressure News may contain information which is outdated or no longer valid.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.

Bob Emmott

Gary Woods

NEW UTILITIES REPRESENTATIVE ON ABSA'S BOARD

We would like to take this opportunity to thank Bob Emmott for his significant contributions and valued leadership as he steps down from his role on ABSA's Board of Directors after serving two terms. Bob was selected by a nominating committee to be an industry representative for the utilities industry in July 2013. Bob provided leadership and governance to the Board and served as both vice-chair and chairperson during his terms. He will be replaced by Gary Woods.

Gary's appointment to ABSA's board for a 3-year term starts on July 1, 2019. He was selected by a three-member nominating committee consisting of a current board member, a member-at-large, and the Assistant Deputy Minister of Public Safety for Alberta Municipal Affairs.

Gary is a first class power engineer and currently holds the position of Vice President / Managing Director, Canadian Gas & Renewable Operations with TransAlta in Calgary, Alberta.

He will be joining current board members Pamela McIntyre (Industry Representative), Neil Fassina (Education Representative), Alejandro Carvallo (Industry Representative), and Michelle Colleton (Minister's Appointee, Public Safety Representative).

We look forward to the industry insight and strategic guidance that Gary will bring to ABSA. ❖

Code Case 2945: An Extension for Qualification of Impact-Tested Welded Procedures

When the 2017 editions of ASME Section VIII-1 and Section VIII-2 were published in July of 2017, they introduced new requirements for the qualification of impact-tested weld procedures that took many vessel manufacturers by surprise. These changes, found in ASME Section VIII-1, subparagraph UG-84(h)(5), and in ASME Section VIII-2, subparagraph 3.11.8.3(g), introduced much more restrictive requirements for the removal of impact test specimens when test plates are used to qualify a procedure representing more than one weld process. Manufacturers found that many of the procedure qualification records used to qualify a weld procedure in accordance with a previous code edition do not adequately support the procedure when the new rules are considered.

Although many of the changes that are made to new code editions can be implemented by manufacturers reasonably quickly, some manufacturers have found themselves in the position of having to requalify and reregister a large number of impact-tested weld procedures. Some such manufacturers have found the new requirement to be particularly burdensome, given the number of procedures that may need to be requalified and the amount of effort that can be required in order to do so.

Code Case 2945 was issued by ASME on December 30, 2018, to allow manufacturers to continue using weld procedures that were qualified to a previous code edition for ASME Section VIII-1 and Section VIII-2 construction, without meeting these specific new requirements. It permits the use of welding procedures that were qualified to the 2015 editions prior to January 1, 2018 to be used until December 31, 2021, as long as the requirements of the code case are met. It should be noted that this extension applies only to non-compliance with the specific new requirements that it mentions, and will not automatically apply to any other new requirements introduced in the 2019 editions of these codes. ❖

Canadian Registration Number Harmonization

In Canada, the establishment of rules for the registration of pressure equipment designs and for issuing Canadian Registration Numbers (CRNs) falls to the individual provinces, with a national standard known as CSA B51 establishing a basic level of consistency between jurisdictions. Although CSA B51 establishes requirements to ensure the compatibility of registration systems between provinces, there are variations in some of the processes used to submit and register designs. These variations do not tend to cause problems when a manufacturer submits within their own provincial jurisdiction, but a need for increased consistency becomes noticeable when they need to submit the same design for registration in each of several provinces, and to account for the subtle variations in the administrative processes and technical review standards implemented by each province.

ABSA is currently conducting a pilot project with several other provinces with the aim of harmonizing the review process between provinces. A process has been established in which a design package requiring registration in several participating jurisdictions will be forwarded to all participating provinces, so that all of the organizations can contribute as needed to the initial design review. They have an allotted period of time to complete their initial reviews, and questions and comments from all reviewers are sent back to the submitter in a single package. Once outstanding items have been addressed, registration numbers are issued by each province and compiled by the initiating province, so that a single response can be returned to the submitter. Since the participating jurisdictions have agreed upon standards for the required scope of the technical review and the required qualifications for the personnel performing it, a detailed technical review performed by the initiating province can be relied upon by all participating parties, and additional provinces need only contribute to the review based on their own unique needs.

Initial reception to the pilot project has been promising, and positive feedback has been received from all involved. Submitters find that they obtain registration for their designs in several provinces much sooner than was possible in the past, and do not need to coordinate the effort of applying for separate reviews in each of several provinces. They benefit from having a single point of contact which acts to represent the interests of all the jurisdictional organizations that need to be involved. The provincial jurisdictional organizations that have been involved have also provided positive feedback and have found that a coordinated review can provide for a smoother and more efficient workflow; several additional provinces have expressed interest in becoming involved. ABSA will soon be launching a web portal that will facilitate electronic submission of designs and will be able to coordinate the review and registration of designs between provincial jurisdictions.

At this point in time, design submissions that are suitable for this pilot project still need to be hand-picked when they are received, as selection depends on where registration is required; there is therefore not yet any way for submitters to explicitly opt in to the program. With the ongoing success of the project, and as more provinces choose to participate, this more efficient process will be incorporated into ABSA's day-to-day business processes. Establishing a harmonized approach to design registration across provinces will improve the level of service delivered to submitters, and will ultimately increase the level of safety achieved through implementation of a harmonized design registration system in Canada. ❖

Seasonal Maintenance of Boilers

Many equipment owners find that the summer months make an ideal time for a planned boiler shutdown to facilitate inspection and maintenance operations, as there is a lower demand for energy due to the warmer weather. Regular inspection and preventative maintenance of boilers is critical to their long-term reliability and continued safe operation. In one recent incident in the province, a boiler was severely damaged due in part to a malfunctioning safety control system.

Late last year, a cast iron sectional steam heating boiler in Northern Alberta was started by an operator, who subsequently left the room. When the operator returned, he found that the boiler had overheated, with portions of the insulation and other surfaces showing charring, and with some of the metallic portions of the boiler visibly incandescing due to the heat. The boiler was safely shut down, and an ensuing investigation showed that the feedwater valve had failed closed, and was not admitting water into the boiler.

This boiler was equipped with two low-water fuel cut-off devices, either of which should have cut off the fuel supply in the event that the water dropped below the required level, but in this case, neither device functioned properly. The primary device appeared to have been in good condition and mechanically operable, but did not operate as expected. Although the secondary cut-off switch had an electronic self-test feature that had shown that the circuitry was in good condition, it was inspected after the incident and the mechanical float was found to be fouled with an accumulation of debris, preventing its physical movement and preventing it from actuating the cut-off switch when the water level dropped.

In this case, the boiler had overheated significantly enough that it had to be scrapped and completely replaced. The consequences of this type of incident, however, could have been far worse: if cold feedwater had been suddenly reintroduced into the overheated boiler, then the sudden generation of high-pressure steam combined with the weakening of the wall material and the sudden thermal shock when contact was made with the cold water could have easily led to a catastrophic failure, with potentially disastrous results.

This incident could have been prevented by more regular inspection and maintenance of the boiler. Even though it is was not determined why the primary low-water fuel cut-off device did not operate as intended, these devices were redundant, and proper operation of the secondary device would have prevented the incident.

Pressure equipment owners in Alberta are reminded that they are responsible to properly operate and maintain their equipment, and that in some cases, equipment may need to be inspected by the owner on a more regular basis than required by the jurisdiction. Safety devices need to be tested on a regular basis as recommended by the manufacturers' instructions, and the boiler along with its controls and safety devices need to be periodically given a thorough examination and servicing by a competent service provider who has knowledge of the applicable legislation and codes. ❖

Power Engineering Employment Status Survey Update

In August of 2018, ABSA began conducting a survey of power engineers registered in Alberta. The power engineers who were surveyed were asked to provide information regarding their employment status. The results of the survey have provided an overview of current employment trends in Alberta and have provided a clearer picture of what the demand is for power engineers in the province.

To date, almost 40% of all registered Alberta power engineers have completed the survey. Of those surveyed, 45% are employed in Alberta and are employed in positions for which their certification is required in Alberta. An additional 16% are employed in Alberta, in positions for which their *employer* requires a power engineering certificate that is *not* required by the regulation. The remaining 39% of those surveyed are either not employed in Alberta, or are employed in a position not related to power engineering.

These results have helped to address concerns from industry regarding a possible shortage of certified power engineers in Alberta, and will continue to facilitate further development of the power engineering certification program. ❖

CANCELLATION OF A POWER ENGINEERING CERTIFICATE

ABSA was notified in early 2018 that an individual representing himself as a 3rd class power engineer had been terminated by his employer after it was discovered that the power engineering certificate he had produced when he was hired had been forged. ABSA conducted an investigation, and in July of that year met with the individual to discuss the allegations and to attempt to resolve the issue, giving him a chance to improve his behavior. Although the individual was not qualified to be certified as a 3rd class power engineer, it was determined during the investigation that he did meet the qualification and experience requirements for a 4th class certificate, and one was issued to him, with the attached condition that he report his employment information to ABSA on a monthly basis for a period of two years.

In January of 2019, ABSA received a call from a neighboring provincial pressure equipment jurisdiction with concerns that the same individual had presented what appeared to be fraudulent power engineering certificates in order to obtain employment in that province. Further investigation showed that the fraudulent certificates he had used were the same as those he had previously used in Alberta. In February, the Administrator, Mr. Mike Poehlmann, cancelled the 4th class Alberta certificate that had been issued to the individual, as permitted by the Safety Codes Act. The individual's ensuing appeal to the Safety Codes Council found the council to uphold the Administrator's decision, agreeing that the revocation of the Alberta certificate was an appropriate consequence, and defending the integrity of the power engineering certification program. The Safety Codes Council's appeal decision is posted on their website at http://www.safetycodes.ab.ca/Public/Appeals/Pages/Appeal-Decisions-.aspx, under the '2019' heading.

The use of false power engineering credentials by unqualified persons constitutes an obvious compromise to public safety, and is not acceptable. Employers who hire power engineers are encouraged to take advantage of the Alberta Certified Power Engineers Directory in order to independently verify the validity of Alberta power engineering certificates that are presented to them. This directory can be found on our website at www.absa.ca in the 'Directories' menu. ❖

DOCUMENTS ISSUED BY ABSA

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

2019-04-16 – *AB-530: Quality Plan Requirements for an Alberta Certificate of Authorization Permit Holder Pressure Vessel Design Submission, Edition 1, Revision 3*, was issued with clarifications and editorial changes.

2019-04-16 – *AB-531: Quality Plan Requirements for an Alberta Owner-User Pressure Piping Design Submission, Edition 1, Revision 3*, was issued with changes to the requirements for competency, training, and responsibilities of Recognized Design Reviewers, and with additional clarifications and editorial changes throughout.

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

ABSA OFFICES

Edmonton - Head Office
9410 - 20th Avenue
Edmonton, Alberta T6N 0A4
Tel (780) 437-9100
Fax (780) 437-7787

Grande Prairie
#203, 10109 - 97th Avenue
Grande Prairie, Alberta T8V 0N5
Tel (780) 538-9922
Fax (780) 538-9400

Fort McMurray
39C Suncor Industrial Campus
160 MacKenzie Boulevard
Fort McMurray, Alberta T9H 4B8
Tel (780) 714-3067
Fax (780) 714-2380

Internet address
http://www.absa.ca

Calgary
#380, 6715 - 8 Street N.E.
Calgary, Alberta T2E 7H7
Tel (403) 291-7070
Fax (403) 291-4545

Lethbridge
Unit 19, 1274 - 3 Avenue South
Lethbridge, Alberta T1J 0J9
Tel (403) 394-1011
Fax (403) 329-0089

Medicine Hat
#103, 346 - 3rd Street S.E.
Medicine Hat, Alberta T1A 0G7
Tel (403) 529-3514
Fax (403) 529-3632

Red Deer
#304, 4406 Gaetz Avenue
Red Deer, Alberta T4N 3Z6
Tel (403) 341-6677
Fax (403) 341-3377