



the pressure equipment safety authority

THE PRESSURE NEWS

Volume 10, Issue 1, March 2005

ABSA is 10 YEARS OLD!

Ten years ago, on April 1, 1995, the Alberta Boilers Safety Association was introduced to Albertans as the new regulatory authority for the delivery of pressure equipment safety programs in the province of Alberta. It was the first jurisdictional arrangement of its kind in North America. Staff who had worked for the Boilers Branch under Alberta Labour provided the initial staffing foundation, complemented over the years with a number of highly skilled and professional people from industry.

In some way we can say that ABSA's history traces back in one form or another to the late 1800's when steam engines and boilers began appearing on the prairies. The first steam boiler regulation was passed in 1897 and in 1912, with the passing of the new Boilers Act, the first Chief Inspector, Francis Hobson was hired.

Although change is always occurring, much has stayed the same. We still rely on design survey, inspection staff, examiners and support staff to deliver the safety programs.

We now have over 18,000 certified power engineers in the province and it is estimated that there are over 500,000 pressure vessels in operation, many of them complex and leading edge in their design.

Ten years is an important milestone and we would like to take this opportunity to thank our associates at Alberta Municipal Affairs and the Boilers and Pressure Vessels Technical Council for the close working relationship and ongoing support that we have enjoyed over the years. Our stakeholders and customers in industry have also been very supportive and we appreciate the partnerships we have formed with many of you to promote pressure equipment safety in the province.

It would be remiss not to commend and thank ABSA's staff, and Board of Directors who have participated in so many important aspects of delivering the programs and improving service to our customers. The very competitive and changing environment in which many of our stakeholders operate will continue to challenge ABSA to look for ways to provide safety programs in the most effective manner.

For ABSA its all about safety, the safety of Albertans. We exist to ensure the protection of Albertans with regard to the safe operation of pressure equipment. Alberta industry and regulators have lead in pressure equipment safety right from the start and our Vision together as an industry is simple – "to continue to lead in pressure equipment safety".

Together we will carry on the legacy that has been established over the last 100 years. We can take pride in the strong relationship we have with each other "to ensure pressure equipment is constructed and operated in a manner that protects public safety."

Many believe that Alberta has set the example of how pressure equipment safety programs can deal with the challenges presented to our provincial jurisdictions to provide the public, businesses and industries with high quality, safe and cost effective support services.

We want to assure you of ABSA's continued cooperation, working with you to protect the health and safety of our families, friends and neighbours

Thank you for your confidence in us over the last 10 years. Together, let's continue to make a positive difference in pressure equipment safety.

G. Campbell
General Manager

Have you visited us on the Internet yet? - www.absa.ca

VERIFICATION OF IN-SERVICE INSPECTOR AND WELDING EXAMINER CERTIFICATION

Since the Alberta Certified Power Engineers Online Directory has been well received by the industry, ABSA has established online directories for Alberta Certified In-Service Inspectors and Alberta Certified Welding Examiners on our Web site, www.absa.ca, for certification verification.

Similar to the Alberta Certified Power Engineers Online Directory, an individual can enter a last name or file number to initiate a search in one of the new directories. Only the certified person's name, file number, certificate type and expiry date will be displayed.

The two types of In-Service Inspector certificates are:

- In-Service Pressure Vessel Inspector Certificate of Competency (IPV)
- In-Service Boiler and Pressure Vessel Inspector Certificate of Competency (IBPV)

The two types of Welding Examiner certificates are:

- WE series which are certificates issued to candidates who obtained their certification by examinations. People holding a certificate with WE series are eligible to work for any ABSA-authorized welder testing organization.

- WG series which are certificates issued to candidates without examination in accordance with Section 16 of the Pressure Welders Regulation. People holding this certificate are eligible to work for the welder testing organization named on their certificates.

Both the certificate holder and the owner have responsibilities to ensure that, when a certificate of competency is required, an activity is only performed by a holder of a valid certificate. These two online directories allow owners and individuals to verify if a certificate of competency is valid and also to confirm the expiry date.

It is the responsibility of the holder of a certificate to apply for renewal of his/her certificate of competency before the expiry date. If a certificate of competency is not renewed before its expiry date, the certificate is no longer valid and the certificate holder cannot legally continue to undertake any activity for which a Certificate of Competency is required.

These two online directories are updated on a regular basis and contain only valid certifications. If a person has not renewed his/her certificate, that person will not be listed in the directory. ❖

Alert and Variance

An ALERT, Information Bulletin IB05-002, was issued to advise users that pressurized truck-mounted vessels, operating at a pressure above 103 kPa (15 psi), are subject to the Safety Codes Act and must be constructed, operated and maintained in accordance with the associated pressure equipment regulations under the Act and the codes and standards adopted as part of the regulations. There have been recent reports of failures of truck-mounted vessels. It is not only illegal to use pressure equipment that does not meet the requirements of the Safety Codes Act but these vessels can rupture causing death or injury.

A Variance, Information Bulletin IB05-001, was recently issued to permit oilfield steam pipelines to be designed generally using the philosophy of Chapter IX of ASME B31.3, *Process Piping*, as an alternative to the method currently published in Clause 14 of CSA Z662, *Oil and Gas Pipeline Systems*.

For a full copy of the ALERT or Variance, please visit our Web site, www.absa.ca. ❖

E-NEWS AND INFORMATION SUBSCRIPTION SERVICES

Since we launched our upgrade Web site on January 5, 2005, hundreds of people have subscribed to the new 'E-News and Information' service. People can subscribe to any or all of the following:

- The Pressure News
- Information Bulletins
- Technical Information
- Certification Information

As a result of this new service, our newsletter, The Pressure News, will no longer be provided in hard copy format after June 30, 2005. Please sign up before then to receive email notification when there is a new newsletter or other information has

been posted on our Web site.

Since we only obtain your email address for these subscriptions, if there is any error regarding your email address or you have changed your email address, you will not receive the notification. As well, we do not collect any other information to contact you for your correct or new email address. If you subscribe to our subscription service and notice that you have not received a notification recently, please inform our Webmaster at webmaster@absa.ca. If you experience any problems with this service, please let us know so that we can better serve you with information about pressure equipment safety. ❖

NATIONAL BOARD - 74th GENERAL MEETING

The 74rd Annual General Meeting of the National Board will be held in Orlando FL, USA in conjunction with the ASME International Boiler and Pressure Vessel Code Committee meetings on May 9-13, 2005.

For further information, please visit the "infoLink!" Page on the National Board Web site www.nationalboard.org, or contact the National Board directly at:

Tel (614)888-8320 or
Fax (614)888-0750

U.S. CUSTOMARY VS. SI UNITS

As was discussed in the Update Seminars held last October, one of the most significant changes in the 2004 Edition of the ASME B&PV Code is that Manufacturers will now be permitted to manufacture, mark and document boilers and pressure vessels in either U.S. Customary units or SI units.

New paragraph U-4, *Units of Measurement*, of ASME Section VIII, Division 1, and parallel requirements in other Sections of the Code, permit the use of either system of units for compliance with all requirements of the 2004 edition. But, it goes on to say, one system of measurement shall be used consistently throughout for all phases of construction (e. g. materials, design, fabrication, and reports).

Each construction Code also has two new appendices, one mandatory and one non-mandatory, which relate to units of measurement. The mandatory appendices establish which units are used in the Code for each system, e. g. areas are measured in in² or mm², not ft² or m². The non-mandatory appendices are entitled *Guidance for the Use of U.S. Customary and SI Units in the ASME Boiler and Pressure Vessel Code*. The latter are very informative and explain, among other things, how the various SI "equivalents" were established for the 2004 edition of the Codes. For example, nominal sizes that have traditionally been in increments of whole inches have

been converted in terms of multiples of 25 mm. Hence, 24" is now 600 mm, not 610 mm as in previous editions.

These conversions are very important since one thing they do is to define break points within rules. As an example, paragraph UG-46(f)(3) in Section VIII Division 1 generally requires a manway for vessels over 36" I.D., but the SI equivalent is 900 mm, not the 914 mm that appeared in brackets in the 2001 and earlier editions. In this example, manways are required for smaller diameter vessels under the SI rules than under the U.S. Customary rules.

ABSA has been receiving calls asking how this is going to work, especially since so many Alberta shops use millimetre measurements on their drawings and on the shop floor, although they use U.S. Customary units on nameplates and manufacturers' data reports. Because the 2004 Codes will not be mandatory until March 31st of this year, we have had no indication from ASME Team Leaders as to how they will be applying the new requirements vis-à-vis SI and U.S. Customary units of measurement.

It is our understanding that one significant concern of the ASME Code Committees is the possibility that some people might try to take advantage of different minimum dimensions or break points in one set of units while still purporting to build

the boiler or vessel to the other set of units. For example if the minimum weld size is ¼" for a vessel being built to U.S. Customary units, one could not excuse an undersized weld by claiming that the SI minimum weld size is only 6 mm, i. e. 0.236". Nor could one avoid installing a manway in a 914 mm I.D. vessel because in U.S. Customary units it is 36" I.D.

Please see ABSA's IB02-006 on our Web site regarding ordering materials correctly in either SI or U.S. Customary units.

The rules in the Codes seem very black-and-white and ABSA will have no option but to enforce them from March 31st onwards. Any Code-stamped boiler or pressure vessel that is being dimensioned in millimetres would also have to use: materials purchased to metric material specifications; SI welding procedure specifications; SI NDE procedures; and, SI PWHT procedures. Of course, drawings could be done in U.S. Customary units with metric dimensions in parentheses, but dual dimensioning does carry its own set of hazards.

We would suggest that any Code user who feels aggrieved by the 2004 Code requirements respecting units of measurement should make their concerns known directly to the Code committee(s) involved. ABSA cannot make interpretations of the Code; only the Code committees can do that. ❖

UNSAFE REPAIR

During a January cold snap, some pipes froze in an unattended boiler room. The boiler was not damaged, but the blowdown line froze hard enough to burst a ball valve. The boiler had subsequently shut down on low water condition due to loss of water through the failed valve. A maintenance worker made a temporary repair of the blowdown line with rubber pipe and hose clamps, and put the boiler back into operation.

Four days later, while two workers from a repair company were in the

boiler room to make a permanent repair to the blowdown line, the temporary repair blew apart under operating pressure filling the room with steam. The boiler had been operating at 5psi, and the temperature of steam at this pressure is 230 Degrees F. Fortunately, the two workers were able to escape the room without being injured.

The lesson is: steam can be dangerous and all repairs to steam piping **must** be done properly. ❖



The 2004 Edition of the ASME Boiler and Pressure Vessel Code will be mandatory for boilers or pressure vessels contracted for after March 31, 2005.

FAILURE OF 2" Y-STRAINER UNDER PNEUMATIC TEST

During a pneumatic pressure test on a starting gas line mounted on a compressor skid, a soap leak test indicated a leak at the gasket of a 2" Y-strainer between the cap and the strainer body. In order to stop the leak, a worker attempted to tighten the cap while the unit was under pressure. This caused the cap to fracture between the gasket shoulder and the threads and to blow off. Fortunately the cap landed below the metal skid and there were no injuries sustained by personnel due to this incident.

It is imperative that proper pneumatic test procedures be strictly followed while a pressure test is being performed. Absolutely no maintenance should be done on equipment under pressure. ❖

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St. Paul
Please note that our St. Paul office has been closed. All services will be provided through the Edmonton Office.

Internet address
<http://www.absa.ca>



Code Case 2429, which allowed the TEMA Standards to be used for tubesheet design for Code-stamped heat exchangers until December 31st, 2004, has expired!

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