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BOARD OF DIRECTORS



Dr. Neil Fassina



Dr. Gordon Nixon

We would like to take this opportunity to thank Dr. Gordon Nixon for his significant contributions and valued leadership on ABSA's Board of Directors. Dr. Nixon completed two full terms as a Director representing the Education sector, starting in April 2010. He will be replaced by Dr. Neil Fassina.

Dr. Fassina will be joining ABSA's Board of Directors for a 3 year term beginning April 1, 2016. He was selected by a 3 member nominating committee consisting of a Board member, the Assistant Deputy Minister of Municipal Affairs, and the Director appointed by the Minister.

Dr. Fassina is Provost and Vice President Academic at NAIT and will represent the Education sector on ABSA's Board. He has been involved in Academics for the past 12 years and, in his current role, he is responsible for providing strategic leadership and operational oversight ensuring that NAIT meets its academic mission.

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

He will be joining Tony Robinson (Manufacturing Representative), Mark Demchuk (Oil & Gas Representative), Robert Emmott (Utilities Representative) and Dale Myggland (Minister's Representative) on ABSA's Board. ❖

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Previous issues of The Pressure News may contain information which is outdated or no longer valid.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

ANOTHER FATALITY CAUSED BY TRYING TO MAKE STEAM IN A PORTABLE PROPANE BOTTLE

An explosion killed a man in January at a private residence in Alberta. It was reported that the man was using a 20-pound propane bottle, which had water in it and was being heated with a propane torch, when it failed catastrophically. A similar incident caused a fatality in Strathcona County in February 1997. In both incidents, the propane bottle was being used as a steam boiler.

When boiled at atmospheric pressure, water will expand to 1700 times the volume as steam. When expansion is prevented, the steam will be compressed and build up great pressure. This is what happened in these incidents with fatal results. Propane bottles are not designed to be used for this purpose and it is very unsafe and illegal to use a propane bottle to generate steam.

If a person has a frozen pipe, such as a water pipe or a drain line, they may look for a way to remove the blockage. The person may hear from a friend, or read on the internet, that a way to do this is to put water in a portable propane tank and heat the tank to make steam and then use a hose to direct the steam to melt the ice. The person may find that this worked and MAY BE LUCKY that the tank did not explode. This is a very unsafe practice and must not be used. It is not the same as water boiling in a kettle where the steam is not contained.

These fatalities were caused by failure of propane cylinders but could also happen using any container that is not designed and constructed for the purpose. It is important that pressure equipment is designed, constructed and operated to prevent injury or death. The Administrator issued an Alert (IB16-002) regarding this fatality. ❖

DEFINITION OF PRESSURE EQUIPMENT

The definition of "pressure equipment" in the Safety Codes Act was reworded; however, the intent and application have not changed. The rewording was to show four different classes of things considered as "pressure equipment". For all classes, the types of pressure equipment are defined in the Pressure Equipment Safety Regulation (AR 49/2006).

A boiler is a class of pressure equipment defined in the regulation. The regulation defines two types of plants that contain boilers - power plants and heating plants. Fired-heater pressure coil is another class of pressure equipment defined in the regulation. Thermal liquid heating system is also a class of pressure equipment that is defined in the regulations. Thermal liquid heating systems contain non-expansive thermal liquid and the system includes the heater as well as any vessels or piping that are part of the system. Even though the included vessels or piping are not pressure vessels or pressure piping because they do not contain expansive fluid, those vessels and piping are pressure equipment because they are part of the thermal liquid heating system.

The final class of pressure equipment is various types of containers designed for pressurized expansive fluid service. This class includes pressure vessels, pressure piping systems and fittings as defined in the regulation. It should be emphasized that types of equipment in this class are not limited to pressure vessels, pressure piping systems and fittings. Note that Section 5(4) of the PESR requires that vessels that are used as hot water tanks or water heaters containing water at a temperature exceeding 65 degrees Celsius must meet all the requirements of the Regulation respecting pressure vessels even though water at 65 degrees Celsius is not an expansive fluid.

As defined in the Safety Codes Act, Interpretations, Section 1(1)

(y) "pressure equipment" means a boiler, a fired-heater pressure coil, a thermal liquid heating system and other equipment designed to contain expansive fluid under pressure, including, but not limited to, pressure vessels, pressure piping systems and fittings, as defined in the regulations; ❖

NEW CALGARY OFFICE LOCATION

The ABSA Calgary office has moved! Our new Calgary location is now equipped to hold exam sittings and training seminars. Regular public sittings for Calgary examinations will begin at our new Calgary location effective April 2016. Calgary public seminars will begin at the new Calgary location effective May 2016. Check your confirmation for date and location. Please consult our website for updated dates & locations.

ABSA's new Calgary office is located in the Deerfoot Atrium South at:
Suite 380, 6715 - 8 Street NE
Calgary, Alberta T2E 7H7

Please Note: There are pay parking lots at this location. Street parking is limited. ❖

AMENDED PRESSURE EQUIPMENT SAFETY REGULATION

The *Pressure Equipment Safety Regulation* (PESR) has been amended by the *Pressure Equipment Safety Amendment Regulation, AR 195/2015*. The consolidated regulation, including the latest amendments, is titled *Pressure Equipment Safety Regulation, Alberta Regulation 49/2006, With amendments up to and including Alberta Regulation 195/2015*.

The Administrator has issued an information bulletin (IB16-001) that identified the amendments to the PESR. The following is a summary of the changes:

- ◆ The definition of “thermal liquid heating system” has been moved to the PESR from the Safety Codes Act;
- ◆ Safety codes officers have been authorized to review and register designs;
- ◆ Section 6 updated the editions of the codes, standards and bodies of rules declared in force;
- ◆ Section 6 provides that the codes, standards and bodies of rules are declared in force as amended or replaced from time to time. This means that the regulation does not need to be amended to make new editions or revisions a requirement in Alberta. The Safety Codes Act establishes that they come into force 12 months after publication unless the Minister publishes an order that a particular document will not be in force, or that the in-force date is changed. ❖

RECENT INCIDENTS INVOLVING FREEZING IN PRESSURE EQUIPMENT

This is a reminder that it is important for owners to review their systems and implement an effective pressure equipment winterization program to prevent damage to pressure equipment caused by freezing. The next few months of warm weather is the time to accomplish this.

Freezing of liquids in pressure equipment can damage pressure components which can be highly hazardous. Freezing can also lead to overpressure of pressure equipment which can lead to much more serious incidents.

Through the winter months of November through January, ABSA received 17 incident notifications of which 4 involved freezing. Fortunately, no personnel were harmed.

Of the 4 freezing incidents, 3 resulted in ruptured piping; 2 of these were due to inoperative heat tracing, and 1 was an isolated line. In the other incident, an air cooled heat exchanger froze as a result of low circulation. ❖

HISTORICAL BOILERS

We are coming to the season whereby historical boilers are prepared and inspected for the coming demonstration season. Historical boilers are mainly used for public displays such as parades and amusement parks. Because of the high public exposure of historical boilers, the inspection, care, control and operation is critical.

Historical boilers are defined as any steam powered locomotive boiler, traction boiler or antique pressure vessel that is operated in a parade or is used for education or entertainment purposes. Section 46 of the Pressure Equipment Safety Regulation mandates that these boilers are inspected and a certificate of inspection permit is issued within the 12 month period prior to the display in an operating condition. The inspection will include, as a minimum, an internal and external inspection and a hydro test all witnessed by an ABSA Safety Codes Officer. Also, the safety valve must be recertified annually.

The National Board Inspection Code contains inspection details that shall be used for the inspection of antique equipment. The owner or his representative must develop an inspection procedure and maintain inspection records for each historical boiler. The inspection procedure must include the requirements of the Pressure Equipment Safety Regulation, the Power Engineers Regulation and CSA B51.

Operation of a traction engine requires a person holding a valid Special Steam-powered Traction Engine Operator's Certificate of Competency. Details of this certification can be found in the Power Engineers Regulation. Information bulletin IB15-011 provides additional information regarding the supervision of traction engines. IB15-011 is posted on the ABSA website. If you need more information on the inspection of antique boilers, contact your local ABSA office. ❖

DOWN BUT NOT OUT

The recent decline of oil prices has turned tables for many owners. As profits decrease, owners may put up their facilities up for sale or on lay-up. The intent of this article is to assist these owners in their dealing with such Pressure Equipment.

Companies Sold or in Receivership

For companies that have been sold or are in receivership, it is important to note that the requirements still apply for the pressure equipment that is in operation and thus the owner must meet the mandatory responsibilities.

Owner Responsibilities

The Safety Codes Act, Section 5, states that “The owner of any thing, process or activity to which this Act applies shall ensure that it meets the requirements of this Act, that the thing is maintained as required by the regulations and that when the process or activity is undertaken it is done in a safe manner.”

Some of the basic responsibilities that apply to **all owners** of pressure equipment in Alberta:

- Ensure all pressure equipment has been issued an ABSA certificate of inspection permit before it is placed into service. Ensure the permit remains valid throughout the service life of the equipment.
- Ensure the pressure relief valves and other protective devices are maintained in good working condition.
- Ensure that the required **integrity assessments** are completed by a qualified inspector and that the information is provided to ABSA to update the records.
- Employ competent personnel to operate the equipment.
- Report any accident or unsafe condition involving pressure equipment, as required by legislation.
- Validate the inventory of the equipment owned against the inventory list that is sent each year. Provide current inventory information to ABSA.
- Ensure that ABSA is notified prior to any repairs or alterations to ensure all required approvals and certifications are completed prior to returning the item to service.

Equipment Temporarily Shut Down

For owners who have decided to temporarily shut down, considerations should be made in placing the equipment into a “safe mode” by employing lay-up procedures. The owner should consult with a specialist for the best lay-up method to preserve equipment. These lay-up procedures would:

- ensure safety for the public by properly de-energizing equipment;
- promote future saleability of these assets;
- preserve the integrity of the equipment by eliminating the damage mechanisms from further activity;
- extend the life cycle of the pressure equipment.

In addition, the owner should also notify ABSA when a boiler or pressure vessel is moved **out of service** by completing an [AB-10](#), Boiler and Pressure Vessel Status Report. In doing so:

- the fees for the pressure equipment will no longer be applicable;
- it will alleviate the owner from mandatory integrity assessments of the pressure equipment while they are not in service.

Excellent references <https://www.cortecvci.com/Publications/Papers/Watertreatment/pdf/mothball.pdf>

Lay-up of Heating Boilers by Robert Ferrell (National Board)

- <http://www.nationalboard.org/Index.aspx?pageID=164&ID=402>
- <http://www.reliableplant.com/Read/28796/do-before-plant-closure> ❖

EXTERNAL TRAINING

ASBA presented two pre-conference training sessions at the *International Pressure Equipment Integrity Association* conference (IPEIA) in February 2016. The Pressure Equipment Safety Legislation seminar and the Pressure Relief Devices seminar were both well attended by industry members. Looking forward, ABSA remains committed to pressure equipment safety awareness and offers informational training seminars in both Edmonton and Calgary.

ASBA's 2016 seminar schedule is now available: <http://www.absa.ca/seminars/course-listing/> ❖

INFORMATION BULLETINS DIRECTORY

Changes have been made to the Information Bulletin Directory at www.absa.ca. The Information Bulletins (IB), issued by the Administrator, are categorized in different Types and a Related Regulations column has been added.

There are 5 Types of IBs: 1. Alert; 2. Interpretation; 3. Notification (information); 4. Variance; 5. Withdrawn. Types of information bulletins that you may have previously seen as Directive are now under Interpretation. The 5 Types of information bulletins are defined at <http://www.absa.ca/home/absa-information/types-of-information-bulletins/>.

There are now 2 directories: Information Bulletins issued by the Administrator and External Bulletins. There is no longer a separate Alerts directory. The Information Bulletin directory is sorted by date but you can sort by Type, by Ref. No. or by Related Regulations. When you sort by Type, Alert is grouped together.

The following are the new Information Bulletins issued by the Administrator. You can view them at www.absa.ca.

- IB16-004 Risk Based Inspection Requirements (AB-505);
- IB16-003 Requirements for Engineered Pressure Enclosures (AB-521);
- IB16-002 ALERT – Fatality Caused by Trying to Make Steam in a Portable Propane Bottle;
- IB16-001 Overview of Amendments to Pressure Equipment Safety Regulation (AR 49/2006). ❖

DOCUMENTS ISSUED BY ABSA

- 2016-02-12 AB-257, Design Scope for Registration of Fittings: this is a form to clearly summarize the scope for fitting registration.
- 2016-02-12 AB-505 Edition 2, Rev. 0, Risk Based Inspection Requirements for Owner-User Pressure Equipment Integrity Management: this edition has general revisions and expanded guidance.
- 2016-02-05 AB-521 Edition 1, Rev. 0, Requirements for Engineered Pressure Enclosures.
- 2016-01-01 AB-518 Edition 7, Rev. 0, Pressure Piping Construction Requirements: this edition has a few revisions from the previous edition.
- 2016-01-01 AB-524 Edition 5, Rev. 0, Pressure Relief Devices Requirements: this edition has a few revisions from the previous edition.
- 2016-01-08 AB-516 Rev. 11, Pressure Equipment Safety Regulation User Guide: the PESR User Guide was revised to incorporate the latest amendment to the PESR (AR 49/2006 up to and including AR 195/2015).
- 2015-12-08 AB-529 Rev. 0, Pressure Equipment Exemption Order User Guide: initial issue of the PEEO User Guide to provide guidance for the PEEO (AR 56/2006 up to and including AR 158/2014). ❖

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