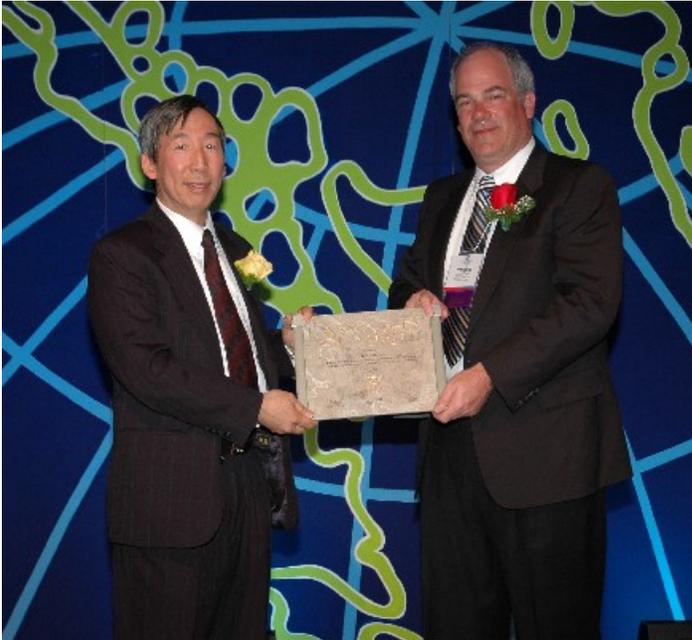


ABSA THE PRESSURE NEWS

Alberta Boilers Safety Association

Volume 9, Issue 2, June 2004



Dr. K. T. Lau being presented with the 2004 Award of Merit by Mr. Doug Hatch, Chair of the CSA Board.

CONGRATULATIONS, KEN

ABSA was advised in March by Robert Griffin, President and CEO of the Canadian Standards Association (CSA) that Dr. Ken Lau, ABSA's Chief Inspector and Administrator for pressure equipment safety under the Safety Codes Act in the province of Alberta has been selected by the CSA Board of Directors to receive a 2004 Award of Merit.

The CSA Award of Merit recognizes individuals who, through their leadership, have fostered the development and advancement of standards, both nationally and internationally.

This award is well deserved, as Ken is very active in providing leadership in pressure equipment standards development work in Canada and elsewhere in North America. He serves in a variety of capacities on the Technical Committees of CSA including B51, B52, B339, B620 and Z662 which are Canadian codes and standards on boilers, pressure vessels, pressure piping systems and other pressure equipment.

ABSA's participation in national and international standards-writing organizations is beneficial to ABSA and Alberta as we are able to provide input on behalf of our jurisdiction and industry and are immediately aware of the latest developments in pressure equipment standards.

Ken was invited to attend CSA's Annual Conference, in June where he was presented with the award. ❖

“PUFF” – THE TRAGIC DRAGON

Let's face it. When volatile fuel is lit, one may be facing with a small explosion or “puff”. We all know that feeling when lighting a propane BBQ, especially with an electronic ignition. The heart races after a couple of unsuccessful attempts and we tend to lean away from the grill while telling the kids to stand well back.

So it is while lighting off a gas/oil burner on a boiler. There is a tense moment while we light off the burner. At what point do we discontinue attempting to light off and close the gas valve? The answer to this question will be in the boiler manufacturer's manual or standard operating procedures derived over time. These procedures should be in written form and signed off by a management representative of the owner and communicated to the operators, in writing.

There have been several boiler furnace “puffs” reported to us this year. These have occurred in manually lit boilers and in automatically fired boilers. These incidents have resulted in significant damage. In one case the two foot thick brick wall of the forced draft fan enclosure was dislocated and in another case the gas train was displaced by one foot due to the force of the blast. Worst was the case where the blast sent metal pieces of the fan flying past the operator. Most fortunately no injuries or deaths have resulted.

The owner is responsible for the safety of his equipment and it is in his interest to ensure that the power engineers or operators are given training on how to ensure the boiler lights off safely.

So, go on. Add another shrimp to the barbie. ❖

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

REQUIREMENTS FOR USED BOILERS OR PRESSURE VESSELS IMPORTED FROM OUTSIDE ALBERTA

Used boilers or pressure vessels brought from outside the Province must meet the following requirements before being placed into service in the Province of Alberta.

Boiler or Pressure Vessel From another Canadian Province	Boiler or Pressure Vessel From The United States
Must have a nameplate with the ASME Code Stamp (example "U" "S" or "H") or have been inspected in accordance with CSA B51 in a Canadian Jurisdiction during manufacture.	Must have a nameplate with the Code Stamp (example "U" "S" or "H"). Must be registered with the National Board.

2. A copy of the Manufacturer's Data Report must be available for each boiler or pressure vessel.
3. The design of each boiler or pressure vessel must be registered in the Province of Alberta. This means it has been issued a Canadian Registration Number (CRN).

If the CRN is not available, the fabricator of the item or the owner may apply for a CRN by submitting a set of fabrication drawings and design calculations prepared in accordance with the Code Edition and Addenda indicated on the Manufacturer's Data Report. If fabrication drawings are not available, the owner may prepare an "as built" drawing showing all the details necessary to perform a complete design review. When designs of items that have been in service are submitted to Design Survey, a confirmation of existing thickness will be required. This thickness confirmation should be coordinated with the Safety Codes Officer in the local ABSA office to ensure the locations examined are satisfactory (see paragraph 4.).

Questions regarding design submission requirements should be directed to the ABSA Design Survey Department, their telephone number is (780) 437-9100. Design Survey submissions should be sent to:

Alberta Boilers Safety Association
Design Survey Department
Suite 200, 4208-97 Street
Edmonton, Alberta, Canada
T6E 5Z9

4. Each boiler or pressure vessel must be inspected by an ABSA Safety Codes Officer. The inspection will consist, as a minimum, of an external visual inspection, internal inspection (or ultrasonic thickness testing for vessels without a manway), hydrostatic test, and any other nondestructive examination that the Safety Codes Officer may consider necessary.
5. A Certificate of Inspection will be issued for each vessel after all requirements listed above have been accepted or performed by a Safety Codes Officer. ❖

A COMMON QUESTION DOCUMENTATION FOR END-USER

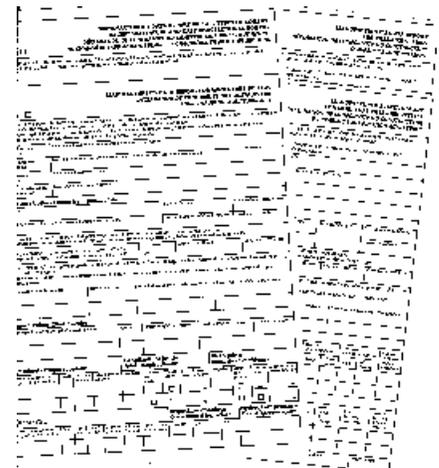
Q: What documentation does ABSA require to be provided to the end user of a pressure vessel or boiler?

A: If it is not required to be provided to the end user by the Code or by the regulations, ABSA does not require it to be provided to the end user. However, if there is something built into a manufacturer's ABSA-accepted QC Manual that requires him to provide certain documentation, that would be an auditable element of the QC system and ABSA would expect that the requirement would be satisfied.

Of course, contractual requirements between the manufacturers and owners/users are not set by ABSA. However, again, as part of the QC system (contract review) such requirements would be auditable by ABSA.

CSA B51 and the ASME Codes require that the manufacturer of boilers or pressure vessels provide the purchaser with a copy of the Manufacturer's Data Report for boilers and pressure vessels. Section VIII, Divisions 2 and 3 do require more to be submitted to the purchaser by the manufacturer.

The regulations require that a copy of the Manufacturer's Data Report be provided to ABSA. For new construction, these are the only mandated documents to be provided to the end user. ❖



WELDING EXAMINER CERTIFICATION IS AN EXCELLENT QUALIFICATION STANDARD

A Welding Examiner Certificate of Competency is a requirement for authorized welder testing organizations but it also provides a formal recognition of knowledge. This designation by examination can provide an excellent additional qualification in various areas such as quality control, inspection, engineering, welding, welder supervision and training. Companies can benefit by having proven, qualified people identified with their organization.

The Pressure Welders Regulation requires that an authorized testing organization employ an individual who holds a Welding Examiner Certificate of Competency to conduct performance qualification tests of pressure welders. The Welding Examiner Certification Program brings professionalism to the performance qualification testing of pressure welders. Certification can be achieved through experience and examinations. The Welding Examiner demonstrates knowledge in welding and cutting processes, steel manufacturing, materials science, quality systems, weld procedures and physical weld coupon evaluation. The Alberta regulations, ASME Codes and National Board Inspection Code also form part of the examination on Regulations and Codes.

A syllabus developed by the Boilers and Pressure Vessels Technical Council outlines the complete content of the four examinations required. Recognition of the Welding Examiner designation gives jurisdictional certification, a certified level of knowledge, and the ability to conduct performance qualification testing under an authorized quality program. The syllabus, AB-94, is available on the ABSA website at www.absa.ca under ABSA Forms and this outlines the eligibility requirements, examination rules, content, subject weighting, and reference materials. ❖

INCIDENT INVOLVING OVER-PRESSURE

On March 12, 2004 an incident involving over-pressurization of a tank occurred in Louisville, Kentucky, United States. As a result, an employee of the company lost his life while 26 local residents were evacuated and 1500 others were to remain sheltered in their home nearby for over a five-hour period.

Investigation by the United States Chemical Safety and Hazard Investigation Board (CSB) noted that the tank involved in the incident was used in a food additive production process and was not designed to operate as a pressure vessel. The tank was not protected by a pressure relief valve.

Part of the operating procedure was to push the food additive from the tank by applying plant air at over 100 psig (689 kPa) to the tank and heating the additive to 160° F (71° C). Failure of the tank resulted in the fatality as well as extensive damage to the plant surroundings and subsequent product losses.

The CSB Investigation Report of this incident is available on:
http://www.csb.gov/completed_investigations/docs/csb_DDWilliamsonReport.pdf.

Lessons to be learned from such an incident:

- Vessels designed for less than 15 psi (103 Kpa) should be open to atmosphere or protected by a pressure relief valve set at or below the design pressure.
- Operating procedures should be reviewed on a regular basis. A HAZOP (hazard and operability study) of each tank, vessel and operator action should be done on a regular basis.
- Operators must be trained to recognize dangerous situations.
- Vessels need to be assessed regularly for their operating conditions
- Know what you have, the condition that it is in and how it is being operated. ❖

DIRECTIVE MOVEMENT OF LPG STORAGE VESSELS

On April 14, Information Bulletin IB04-004 was issued in relation to movement of tanks not designed for transportation or delivery of propane.

*Stationary pressure vessels are not designed for use as pressurized transport vessels and **MUST NOT** be used for that purpose.*

A bulletin providing specific guidance on this matter was developed and released in 1991 jointly by Plumbing and Gas Safety Services Branch, Alberta Labour, Transportation Safety Branch, Alberta Transportation, Dangerous Goods Control and Boilers and Pressure Vessels Branch, Alberta Labour. That bulletin is still valid and is attached as part of the Directive. ❖

ALERT VALVE FAILURE

In May, Information Bulletin IB04-005 Alert to Pressure Equipment Owners and Operators was issued in relation to a valve failure incident.

The stem of a level gauge isolating valve shot out of the valve, propelled by 1500 psi steam, when a boiler operator was opening the valve to warm up the gauge glass during a boiler startup. Fortunately, the boiler operator was standing to the side of the valve, rather than directly in front of it, and was not injured.

The root cause of the incident is due to the failure of the anti-rotation tack welds on the valve bushing. As the valve hand-wheel was turned, the bushing unscrewed from the yoke instead of the stems' rising through the bushing.

All pressure equipment owners are asked to review the valve manufacturer's maintenance procedures regarding anti-rotation tack welds or pins and ensure that all safety elements are present.

For a full copy of the Alert, please visit our web site, www.absa.ca. ❖

ALBERTA CERTIFIED POWER ENGINEERS ONLINE DIRECTORY

Updating the article "Verification of Power Engineers Certification" in Volume 8 Issue 3, September 2003 of The Pressure News, an online directory of Power Engineers with valid certificates in Alberta will be available in June this year.

The objective of this online directory is to allow the pressure equipment industry and individual power engineers to verify their power engineers' certificates. All Alberta power engineers with valid certificates, along with their file number, type of certificate and certificate expiry date will be posted. A certificate remains valid so long as it is renewed annually.

The Power Engineers Certification Online directory and instruction for searching can be accessed from the Education and Certification button on our www.absa.ca web site. The Power Engineers Regulation (AR 85/2003) under the Alberta Safety Codes Act requires certified Power Engineers to operate, within the authorized scope of practice, in a power plant, heating plant or thermal liquid heating system. ❖

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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>

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