

ABSA THE PRESSURE NEWS

Alberta Boilers Safety Association

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MESSAGE FROM THE BOARD OF DIRECTORS

The business of promoting pressure equipment safety in 2002 was brisk but somewhat less intense than 2001. ABSA continued to build on its effectiveness as the agent for public safety related to this equipment.

ABSA and Alberta Municipal Affairs (AMA) made considerable progress in 2002 in arriving at a set of partnership principles. These principles were used to guide discussions which resulted in an updated "administration agreement" between ABSA and AMA and will form the basis for further discussions aimed at changing the accountability and autonomy of the ABSA organization.

The ABSA organization did a fine job of progressing according to the three year plan for the organization.

There was continued progress towards driving down the overdue inspection backlog with rates now below 1%. Efforts to leverage information technology slowed somewhat over the year due to resource related issues. There was considerable progress with improving the training and development process within the organization. This was particularly important work bearing in mind the demographics of the organization.

ABSA certified several new owner user programs over the year and as a result continued to shift the emphasis in the organization from that of inspection to auditing. This initiative has enabled clients to construct quality management plans that fit their business while at the same time meeting the quality assurance requirements for operating equipment.

Our connections remained strong nationally and internationally with



Season's Greetings

Best Wishes for Peace and Joy
this Holiday Season
and a New Year of Health,
Happiness and Prosperity

continued leadership provided in SOPEEC (Standardization of Power Engineers Examination Committee) towards national approaches to power engineering testing. ABSA successfully hosted the annual meetings of the Canadian Association of Chief Inspectors and CSA B51 and B52 code committees in August. Close working liaison continued with CSA, ASME and the National Board.

Dennis Gartner, formerly Assistant Deputy Minister of Safety Services with AMA moved to a new role with

Alberta Finance. Dennis will be missed as a strong supporter and sage advisor of ABSA. We welcome Denis St. Arnaud to the Safety Services role and look forward to continuing to build our partnership.

I believe ABSA staff have continued to demonstrate a "continuous improvement" mindset over 2002 and the future looks bright when it comes to pressure equipment safety in Alberta.

Ted Seaman
Chair, Board of Directors



On Friday, December 13th, ABSA recognized past and present board members for their commitment and contribution. Past Board members Frank Kapuscinski, Al Futcher, Al Brekke, and Barry Kossowan (missing) are in the front row. Current Board members Owen Baker, Ted Seaman, Yves Tremblay, Harry Maekelburger and Gerald Seib (missing) are in the back row.

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

USE OF SUBMERGED ARC WELDING FLUX FROM RECRUSHED SLAG

For organizations contemplating the use of submerged arc welding flux which is obtained from recrushed slag to make welds that must comply with ASME Section IX, the following is a summary of Section IX requirements.

Within ASME Section IX, paragraph QW-404.36 provides the specifics of Code requirements. Paragraph QW-404.36 allows two alternatives, either one of which must be met prior to using the flux from recrushed slag:

1. Each batch (quantity of dry ingredients mixed at one time in one mixing vessel) or blend (two or more dry batches from which quantities of each are combined proportionately, then mixed in a mixing vessel), as defined in ASME Section II, Part C, SFA-5.01, shall be tested in accordance with Section II, Part C by either the manufacturer of the flux or the user. The qualification of crushed slag for use as welding flux is detailed in SFA-5.17, paragraph 15.1 (and further explained in SFA-5.17 Annex paragraphs A6.1.5 and A6.1.6). If crushed slag is classified as a welding flux in accordance with SFA-5.17 the designation would include an "S" as the second character of the classification e.g., FS7AZ-EM12K. As the classification is for a flux-

wire combination, if classification is completed by the flux manufacturer the user would have to provide information on the necessary weld wire for classification. Presuming that there are no other changes to WPS essential or supplementary essential variables, as applicable, if the revised consumable classification is not specified then revision of the WPS would be required.

2. A Welding Procedure Specification may be qualified, by the user of the flux, using a specific batch or blend of unclassified flux in accordance with ASME Section IX, paragraph QW-404.9. In this case the WPS would specify the batch or blend designation, and the WPS would not be suitable for use after the specific batch or blend of flux was consumed.

It is important to point out that Section II, Part C, SFA-5.17, paragraph A6.1.5 does differentiate between flux from crushed slag and recycled flux. Recycled flux is flux that was never fused into slag. Paragraph A6.1.5 further states that this un-fused flux can be collected from a clean surface and reused without crushing or reclassification.

National Pressure Equipment Conference

The Seventh Annual Pressure Equipment Conference will be held at the Banff Centre January 29-31, 2003. The theme of the upcoming Conference is "Learning from Experience". Please visit the Pressure Equipment Industry Conference website, <http://www.sait.ab.ca/pressureconf/> for more information.

The Pressure Equipment Industry Conference is hosted by the Energy Department at the Southern Alberta Institute of Technology (SAIT), co-sponsored by the Alberta Boilers Safety Association (ABSA) and supported by the Upstream Chief Inspectors Association (UCIA) and the Alberta Refinery Petrochemical Inspectors Association (ARPIA) among others. The goal of the conferences is to promote technical improvement toward excellence in design, safe operation, and inspection of pressure equipment.

JOIN US at the conference and hear the presentations, and meet your colleagues. For the Conference speaker schedule, registration information and trade booth application form please refer to the documents at the national pressure equipment conference website.

INSPECTION OF RIVETED BOILERS

We are coming to the season of the inspection of the antique boilers which are mainly used in parades and amusement parks. These boilers are usually riveted and require special inspection methods to provide for the safety of the general public as well as the operators involved.

ABSA has a guideline regarding the inspection of riveted boilers. Here are some highlights:

- The boiler must be inspected by an ABSA inspector annually. This would involve a successful hydrostatic test of the boiler at 1.5 times the set pressure of the safety valve together with an internal inspection of the boiler
- Depending on the condition of the

boiler but as a minimum, every five years a thorough inspection must be carried out. This inspection would consist of the exposure of the outer shell if the boiler is insulated. An hydrostatic test at 1.5 times the safety valve setting pressure has to be carried out prior to starting any non-destructive examination (NDE) of the boiler. The NDE would consist of ultrasonic examination (UT) of at least 30% of the rivets and magnetic particle examination (MPI) 100% of the long seam next to the riveted joint. Also all the firebox stay bolts and rivets must be checked using the UT method together with MPI of all knuckle areas of the boiler and 100% MPI of the tubesheets.

- The safety valves are to be recertified annually.
- Should the boiler have a lap seam, its safety factor needs to be increased (and accordingly, the maximum allowable working pressure reduced) annually as detailed in the CSA B51 Code as the regulations.

This is a brief outline of the requirements. It should be noted that these boilers must be operated by properly certified personnel holding a valid power engineer Certificate of Competency at the level required for the specific boiler involved. If you need more information on the inspection of riveted boilers, please contact your local ABSA office.

GENERAL SUPERVISION OF HEATING PLANTS

While the Safety Codes Act, Engineers' Regulations AR319/75 state that heating plants 750kw or greater shall be under the general supervision of the holder of a valid certificate of competency of the required class, there seems to be a lot of confusion as to what "General Supervision" really is and when it is required.

General Supervision is defined as a minimum of two checks a day by the holder of the required certificate of competency, at least 8 hours apart, while the building is occupied. In the event the heating plant is in good working order and the building is not occupied on weekends or statutory holidays, the general supervision requirement may be waived for those days to a maximum of 96 hours. If it is known that the building will be occupied on weekends or statutory holidays then the checks must be made. This means if there are scheduled activities outside of the normal days that the plant is manned (i.e.: weekends/summer holidays) then the plant must be checked if it is in operation. An example of this would be the scheduled use of a school or hall for summer activities.

Articles on General Supervision for both Heating Plants and Power Plants appear in back issues of The Pressure News. Archived articles from *The Pressure News* are available by following the "Newsletter Index" link at www.absa.ca.



PRESSURE EQUIPMENT SAFETY LEGISLATION SEMINAR

ABSA has developed a training seminar to assist people who wish to enhance their knowledge and understanding of Alberta legislation governing pressure equipment safety. While this three-day program does not specifically focus on the PESL examination for In-Service Inspector Certification, it does provide instruction on relevant elements of the legislated requirements for pressure equipment safety. It includes presentations on the Safety Codes Act, CSA and ASME codes, governing bodies, quality systems, construction, inspections, accident investigations, repairs and alterations and other topics.

The seminar schedule for 2003 has now been set:

- o February 4, 5 & 6
- o June 3, 4, & 5
- o October 7, 8, & 9

Seminars are held in ABSA's Edmonton office and are restricted to a maximum of 16 participants so register early if you are interested in attending. The cost of the three-day seminar is \$425.00 plus GST. Lunches and all materials are included.

If you wish to register for the program, call Geeta Chanana at 780-433-0281 extension 311 or by email Training1@AlbertaBoilers.com.

WHAT IS A BOILER AND PRESSURE VESSEL PERMIT?

A boiler or pressure vessel inspection/certification permit is called a Certificate of Inspection. It is a legal document that certifies a boiler or pressure vessel has been inspected and may be placed into service in Alberta. The Boilers and Pressure Vessels Regulation (Alberta Regulation 293/94) requires a Certificate of Inspection before any boiler or pressure vessel can be placed into service.

To obtain a Certificate of Inspection, the vendor, owner, installer, or contractor must contact ABSA to arrange for an inspection by a Safety Codes Officer. If the installation meets the requirements of the Safety Codes Act, the ABSA Safety Codes Officer will issue a Certificate of Inspection. If a Certificate of Inspection is not issued, the Safety Codes Officer will advise of the deficiencies requiring corrective measures. Putting the boiler or pressure vessel in service without the Certificate of Inspection contravenes the Safety Codes Act and may result in fine and/or imprisonment.

Some small boilers and pressure vessels do not require a Certificate of Inspection provided certain conditions are met. The owner, installer, contractor or vendor may check with an ABSA Safety Codes Officer to find out if an exemption applies to a particular boiler or pressure vessel.

Under the Boilers Delegated Administration Regulation (Alberta Regulation 32/2002) the Alberta Boilers Safety Association (ABSA) is delegated the power to administer pressure equipment safety programs in Alberta. ABSA works in partnership with the Safety Codes Council and Alberta Municipal Affairs to provide relevant information to boiler and pressure vessels industry. Information about boiler and pressure vessel Certificates of Inspection may be accessed from Municipal Affairs' website, at www3.gov.ab.ca/ma/ss/boilers.cfm.

Additional information about Certificate of Inspection is posted on ABSA's website in the Frequency Asked Questions (FAQ) web page at <http://www.absa.ca/faq/bpv-permit.htm>.

CORRECTION/CLARIFICATION PRESSURE PIPING SYSTEMS

In the September 2001 edition of the Pressure News, in the article entitled *Trends in the Welding Industry*, it was stated that "ABSA has not required certification of pressure piping systems assembled using only threaded or compression fittings, provided that only certified fittings and acceptable pipe/tubing are used". This statement was made intending to cover design registration and was based on the presumption that such systems are most frequently less than 0.5 m³ in volume. That being the case, design registration would not be necessary under the provisions of the regulations.

Notwithstanding the exemption from design registration, all other provisions of the regulations relating to pressure piping do apply. These provisions would include compliance with the applicable piping code, use of registered fittings and fabrication by a company which holds a certificate of authorization to fabricate such piping.

Regrettably, an impression seems to have been given mistakenly that there were no requirements for non-welded piping or tubing systems in the regulations. Pressure piping is defined in the *Boilers and Pressure Vessels Regulation*, in part as, "pipe, tubes, conduits, fittings, gaskets, bolting and other components that make up a system the sole purpose of which is the conveyance of an expansible fluid under pressure ...". There is no mention of the method of joining the components and tubing is included in piping. Likewise, there is no exemption in the regulations that is based on method of joining components in a pressure piping system, nor are such systems exempted from CSA B51 or the ASME the B31 Codes.

ABSA regrets any confusion the previous article may have created as to the coverage of mechanically joined piping/tubing systems.

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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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