ABSA
the pressure equipment safety authority

THE PRESSURE NEWS

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YEAR END MESSAGE

ABSA is committed to pressure equipment safety. Our mandate is to protect public safety by ensuring the safe construction and operation of pressure equipment in the Province of Alberta. With its heavy industry, Alberta has significant exposure to pressure equipment and ABSA is proud of the excellent safety record that we share with designers, builders, operators and owners of pressure equipment in this province.

As we look back, 2009 presented a number of unique challenges in fulfilling our mandate. Following 2008, a year in which the organization saw unprecedented demand for services, the worldwide economic decline of 2009 resulted in a rapid decrease in activity within most stakeholder groups. Cancellation or deferral of major capital projects and a dramatic reduction in drilling activity together with a general industrial slowdown resulted in reduced demand for services related to design review, fabrication inspection, welder testing and seminar attendance. Other services related to in-service pressure equipment inspection, quality system audits and power engineering certification remained stable. Through careful monitoring of operating costs, flexible allocation of staff resources and streamlining of service delivery, the organization accomplished its operating plan within budget.

We are grateful for the outstanding leadership the Board has provided to ABSA through Don McFarlane, President, Cessco – Chairman; Dave Rushford, Vice President Encana - Vice Chairman; Warren Fraleigh, Business Manager, Boilermakers Local 146 - Treasurer; Brian Larson, Past President, Lakeland College - Secretary; and John Ell, Vice President, ATCO Power.

With a strong balance sheet going forward and committed staff, we are confident that ABSA will successfully overcome the challenges of these difficult economic times.

The Board and all the staff at ABSA wish you all the best for the holiday season as you share it with family and friends. Our wish is that your new year will be safe and filled with happiness, joy, health and prosperity. ❖

BRUCE MCWHIRTER CHANGES ROLES WITH ABSA

It is with mixed feelings that we advise you that Bruce McWhirter has decided to retire from full time employment with ABSA effective December 31st, 2009. Having joined the Boilers Branch in 1984, he completed 25 years of service last September.

In the same breath, we are pleased to announce that although Bruce is retiring from full time employment, he is not leaving ABSA entirely. He will continue to work reduced hours, under a contract arrangement, on special projects, the majority of which relate to developing and delivering external training, and helping us deal with the more complicated technical issues that arise.

Bruce has developed a solid reputation with the industry, other jurisdictions across Canada, and our own ABSA staff. He has demonstrated time and again that he can be depended on for his knowledge, experience and willingness to help and we are glad that he is willing to continue in this capacity.

We plan to celebrate this milestone with Bruce with a retirement recognition event sometime in February. Stay tuned. ❖

DID YOU KNOW … ?

In the 2009 Addenda to ASME Section VIII, Division 1, the UD Code Symbol, which had previously been applicable to rupture discs and rupture disc holders, became the required Code marking for all non-reclosing pressure relief devices. This means that pin devices* (buckling pin or breaking pin devices) are now required to be capacity rated according to Code paragraph UG-127 and to be stamped with the UD symbol. Provisions for these pin devices are covered in Code paragraphs UG-127(b) (revised ’09) and UG-138 (new).

It is not known how quickly these Code-stamped items will be available on the market, but where the use of such devices has been accepted by ABSA for a specific installation (see the Pressure Equipment Safety Regulation, Section 38(1)(b)), every attempt must be made to access Code-stamped pressure relief devices.

*A *pin device* is a non-reclosing pressure relief device actuated by inlet static or differential pressure and designed to function by the activation of a load-bearing section of a pin that supports a pressure-containing member. Note that a *pin* is not necessarily circular in cross-section. ❖

ASME B31.3 CODE REQUIREMENTS
- HYDROSTATIC TEST PRESSURE CALCULATIONS -

This article is to call attention to the additional clarifications provided in the 2008 Edition of the ASME B31.3 Code regarding establishing of hydrostatic test pressures of piping systems.

Paragraph 345.4.2(b) of the Code specifies that, for piping systems constructed of more than one materials or that have more than one design temperature, all the pressure components must always be evaluated to see whether it is the pipe, flanges or other fittings that will control the hydrostatic test pressure.

As a result, the hydrostatic test pressure of all piping systems of low alloy steel, high alloy steel or non-ferrous materials would have to be adjusted based on the largest stress ratio of all the components. Stress ratios of piping supporting elements and bolting need not be considered in the test pressure calculations. Stress ratio is the ratio of the allowable stress at test temperature divided by the allowable stress at design temperature.

However, it is important to note that for carbon steel piping with a specified yield strength not greater than 42 ksi, the Code allows the use of the stress ratio of any of the components in the assembly in the calculation of the test pressure . Therefore, for a majority of carbon steel piping with design temperatures up to 400°F, the stress ratio R_r used in the test pressure calculations likely would not exceed 1.0.

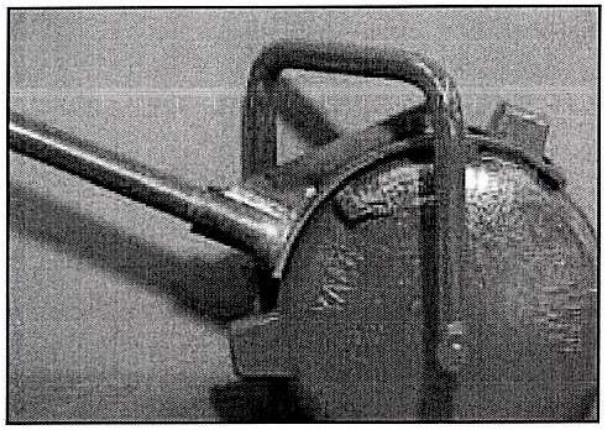
On a separate but related subject, our readers should remember that even though hydrostatic tests may contain less stored energy when compared with pneumatic tests, precautions must be taken in conducting hydrostatic tests because of the potential risk involved. As previously reported in The Pressure News, September 2008 issue, hydrostatic tests could be highly dangerous and a failure during a hydrostatic test could result in injuries or even fatalities. ❖

Threaded Vessel Closures

It has come to ABSA's attention that a number of field operators are requesting that fabricators complete welded repairs on the "lugs" of threaded closures after they have been hammered to the point where the closure is not operable.

A threaded closure, as shown in the attached picture, normally consist of two main components, the CAP (where the lugs are located) and the HUB (which is usually welded to the vessel shell). The CAP is threaded onto the HUB and is tightened or loosened by the use of a *"lug wrench"* (also known as a spanner wrench) as indicated in the figures below. A hammer must never be used for tightening or loosening the CAP. A CAP that has been tightened/loosened by hammering has translated much of the shock loading and stresses onto the threads causing stretching, cracking, galling and other damage to both the CAP and the HUB threads, potentially causing a safety hazard. A number of closure manufacturer' have thread gauges available to identify acceptability of the threads.

Repair through welding of the CAP lugs, that are already deformed, is likely to result in deformation and fractures in the underlying CAP; therefore, a welded repair is not recommended. Many manufacturers have procedures or guidelines for the installation, operation, and maintenance of closures they produce. All owners are reminded that they are responsible for the maintenance and safe operation of pressure equipment. If considering a weld repair for a closure, the original manufacturer must be consulted to ensure the repair is completed in accordance with their recommendations to ensure safe operation of these closures ❖



AB-518 Pressure Piping Construction Requirements

The Administrator for pressure equipment safety issued the *Pressure Piping Construction Requirements* document AB-518 to specify pressure piping construction requirements under the Safety Codes Act on May 1, 2009. The requirements are intended to foster enhanced effectiveness of the manufacturer's Quality Management System (QMS) by proposing a structured system and including provisions such as training and self assessment.

Compliance with the AB-518 will be mandatory effective January 1, 2010. Pressure piping QMS certification audits to verify compliance to the AB-518 document will be phased in as described below:

New applicants: Effective Jan. 1, 2010.
Renewal of Certificate of Authorization Permit (COAP): By the expiry date of the COAP.

The requirements apply to pressure piping manufacturers who hold a COAP issued under the AQP-2000 or 3000 series.

Owners of pressure equipment, who have registered their pressure equipment integrity management (PEIM) system with ABSA and the scope of their certification includes in-house construction of pressure piping, are asked to review their PEIM system documentation and ensure that any requirements which are in addition to the AB-512 O/U Integrity Management Requirements document, are addressed. These Owners are not required to complete an AB-518b Manual Review Checklist. Compliance to the AB-518 document is mandatory by the renewal date of company's COAP.

AB-518 requirements do not apply to manufacturers holding COAP for the construction of boilers, pressure vessels and fittings even if they have construction of pressure piping covered under the scope of their certification. This is because their quality management system should have covered the provisions for piping construction. However, these manufacturers are encouraged to review the AB-518 and take the opportunity to enhance the effectiveness of their existing QMS manual by including additional quality elements, if any, proposed by the AB-518 document, updating the rest of the quality elements and structuring the system to assure long-term performance management. ❖

ABSA SEMINARS

Anyone who has anything to do with pressure equipment in the Province of Alberta has the responsibility under the Safety Codes Act to meet the requirements of the Act and regulations. ABSA has developed seminars to provide information on the Alberta requirements and ABSA's programs for pressure equipment safety. The three current seminars are briefly summarized hereunder:

Pressure Piping Fabrication Requirements and Quality Control (Piping) Seminar
The objective of this 2-day seminar is to provide information to the fabricators, engineering companies and users of pressure piping systems about the requirements of the Safety Codes Act, regulations, and applicable ASME piping codes and to provide awareness and guidance for the effective implementation of a quality management system.

Pressure Equipment Safety Legislation (PESL) Seminar
This is a 2-day seminar that will enhance attendees' knowledge and understanding of Alberta requirements and programs for pressure equipment safety. The seminar includes presentations on: the roles of the governing bodies, the Safety Codes Act and regulations, CSA and ASME codes, quality systems, construction, inspection, repairs and alterations and accident investigation.

Pressure Equipment Safety Regulation (PESR) Seminar
This 1-day seminar provides an overview of Alberta requirements and programs for pressure equipment safety under the Alberta Pressure Equipment Safety Regulation (AR 49/2006) and is available for in-house training. This seminar provides an overview of pressure equipment legislation and a more detailed presentation of the Pressure Equipment Safety Regulation (PESR) with emphasis on owner's responsibilities.

The regular schedules for the Piping Seminar and the PESL Seminar are posted at www.absa.ca. The next offering of the Piping Seminar is on January 20 & 21 at ABSA's Edmonton Office. Both the Piping Seminar and the PESL Seminar are offered in Banff on February 1 & 2 prior to the Pressure Equipment Conference. As well, the Piping Seminar, the PESL Seminar and the PESR Seminar are available to companies for in-house training purposes. You can contact ABSA's Education and Certification Department for more information.

ABSA has seminars in development covering Pressure Relief Valve Requirements; Shop QC; Design; Design Registration; Power Engineers Regulation; and Requirements for EPC's and we will be asking for input from stakeholders. Details on two of these seminars under development are included in this newsletter. Please watch www.absa.ca for the announcements of availability of the new seminars.

SEMINARS IN DEVELOPMENT

Quality Control Seminar

As a result of interest expressed by Industry, ABSA is pleased to announce that we will be developing a Quality Control Seminar for Pressure Equipment Fabricators. Over the next year, we will be building our Shop Quality seminar which will be directed towards training Quality Control personnel in the shops, Owner-Users, and third party inspectors to deal with ABSA, Code requirements and shop issues. This will be done with the input of industry members and stakeholder consultation. The first seminar is expected to be presented to the public in October of 2010. The details of this seminar are dependent on the stakeholder consultation process. This is a continuation of ABSA's commitment to ***Safety through Education*** and we would like to thank industry for their continued support.

Pressure Relief Valve Seminar

ABSA is in the process of developing a Pressure Relief Valve (PRV) seminar. The need for the seminar was promoted by input received from industry over the years and also identified during the training survey initiated by ABSA in October 2005. Work on the development of the seminar started in the fourth quarter of 2008 and formal development of the seminar was included in ABSA's operational plan of 2009-2010. Additional input from industry for the seminar was sought in October 2008 providing the basis of the proposed seminar content which was reviewed in a joint industry-ABSA meeting in Nov. 2008.

The seminar intends to cover provisions for pressure relief valves under the Safety Codes Act; Pressure Equipment Safety Regulation; ASME Sections I, IV, VIII, VI, and VII; and CSA B-51 Codes and other provisions including, NB-23 and 18; selection of PRVs per API-520; installation per API-520; requirements with respect to installation of block valves in the relief path; inspection guidelines of API-576; and operation, maintenance and servicing requirements.

The first public PRV seminar is expected to be delivered by October 2010. ❖

FRAUDULENT CERTIFICATE

ABSA was contacted by an investigator with the Government of Alberta regarding a fraudulent certificate. A person at a job site in northern Alberta had a Journeyman Pipefitter certificate purportedly issued by ABSA. ABSA does not issue Journeyman Pipefitter certificates. The person pleaded guilty to forgery and received a 120 day jail sentence.

ABSA does issue certificates of competency to individuals who meet the requirements of a power engineer, pressure welder, welding examiner or in-service inspector and no one may perform these activities in Alberta without the ABSA-issued certificate. ABSA is interested in obtaining information on any concerns of the validity of any certificates for these occupations. You can also check for valid certificates for power engineers, welding examiners and in-service inspectors in the Directories at www.absa.ca.

ABSA will take all appropriate follow-up actions on receiving reports of fraudulent certificates including recommendations for legal action against those involved in the possession or uttering of fraudulent certificates. ❖

Congratulations

The National Board's 90th Anniversary

It was 90 years ago on December 2, 1919 that the National Board was formed by seven chief inspectors representing 15 jurisdictions in USA.

It was during this gathering the newly minted National Board would set forth its objective: to provide for an exchange of opinions regarding enforcement and inspection procedures uniform throughout member jurisdictions. As we know, this objective matured into the National Board Preamble, One Code. One Authorized Inspector. One Stamp.

ABSA FEE SCHEDULE ANNOUNCEMENT

ABSA has reviewed the fees and charges as they relate to the powers, duties and functions delegated to us under the Boilers Delegated Administration Regulation and has determined that a fee increase is not necessary at this time.

Therefore, the fee schedule established in 2009 will remain in effect for 2010.

ABSA is a self-sustaining not-for-profit organization. We recover our costs through revenues generated by fees charged to customers and we place a high importance on ensuring value for cost. Fees are necessary to ensure the operational effectiveness of ABSA and we are committed to giving you our best effort with regard to the effective delivery of pressure equipment safety programs in Alberta. ❖

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.

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