

# ABSA THE PRESSURE NEWS

Alberta Boilers Safety Association

Volume 1, Issue 6, November 1996

## MESSAGE FROM ABSA's CEO

This will be our final issue of 1996 and also the completion of ABSA's second year of operation. We have achieved a number of major milestones and have completed several of our objectives. Industry meetings were held in all eight districts, special customer meetings regarding owner/user programs were conducted and no less than four Design Survey seminars were held. These opportunities have provided us with considerable insight into what customers expect from ABSA and what we need to concentrate on in future years.

We have set in place a new equipment registry computer system which will ultimately provide us with a better management tool to schedule our inspection work, report on our progress and help manage high risk equipment.

This year has been an exceptionally busy year for our shop inspectors due to a 15% increase

in fabrication activity in our province. The In-Service inspection level has also been at a record high and as a result ABSA has had to hire several new inspectors throughout our districts. Design Survey's efforts to eliminate our backlog has been impacted by an increased level of submissions due to the design of new plants and expansions to existing facilities. Despite the increased activities we have made improvements and will continue to improve with the addition of extra permanent staff.

Next year will be our 100th year in Boiler and Pressure Vessel safety and we would like to commemorate this milestone with a special publication of a comprehensive hard cover book which will record the history of this industry and devote a large section on

the various facets of our pressure equipment industry today. I will be writing to all of the various companies requesting support and involvement in the production and publication of this historic book which will give each company an opportunity to be part of our "history" book.

In closing I would like to offer my sincere thanks to all of our clients and associates for your cooperation and understanding during this year of change and I extend my best wishes to you and your families for the coming year.

John Verwey, CEO

receipt of an application, ABSA will assign a tracking number to the design, will indicate the name of the Design Surveyor who will be dealing with the design and the date by which you may expect to hear back from us (either with the acceptance or with a request for additional information or corrections) and will fax back a copy of the Application Form containing this new information. This will be done within one working day of ABSA's receipt of the submission.

The form will also have boxes for the client to check off whether the submission is new or a resubmission,

which should help us to keep better track of designs.

Finally, there will be space for ABSA to apply its stamp to accepted submissions. We will then fax the form with the acceptance stamp on it back to the client, in advance of sending the stamped, accepted drawings.

## Season's Greetings

Our very best wishes for  
a happy holiday  
and  
a prosperous New Year

## DESIGN REGISTRATION NEW APPLICATION FORM

At the very well attended Design Survey Seminars with Industry in Edmonton and Calgary in October, a draft of the proposed new Design Registration Application Form was introduced. The feedback we received at that time was very positive and we would hope to get more comments by phone, fax or mail in the next while.

The Application Form is intended to act as the client's transmittal form to ABSA as well as our acknowledgement and response form to the client. These approaches are aimed at improving our level and means of communication with you, our customers. For example, on

## SAFETY VALVE DRAINS AND DISCHARGE PIPING

In a previous issue of "The Pressure News" the article on "Rig Boiler Safety" briefly addressed the hazards associated with the improper location and orientation of discharge piping from safety relief valves in steam service. It has been brought to our attention that in certain installations similar problems may also occur with respect to the drain piping coming off the pressure relief valve discharge line, and the orientation of the open drain connection on the valve itself.

One must remember that requirements of the applicable code paragraphs namely PG 71.3 and PG 73.1.5 are to provide for the safe elimination of any condensate build-up in order to ensure

the proper operation of the safety valve, when required. Adequate drainage is a necessity and operators are reminded that paragraph PG 73.1.5 requires in part that,

*" a body drain below seat level shall be provided in the valve and this drain shall not be plugged during or after field installation."*

and that Paragraph PG 71.3 requires that

*"all safety valve or safety relief valve discharges be so located or piped as to be carried clear from running boards or platforms. "*

and that *"Ample provision for gravity drain shall be made in the discharge pipe at or near each safety valve or safety relief valve, and where water of condensation may collect."*

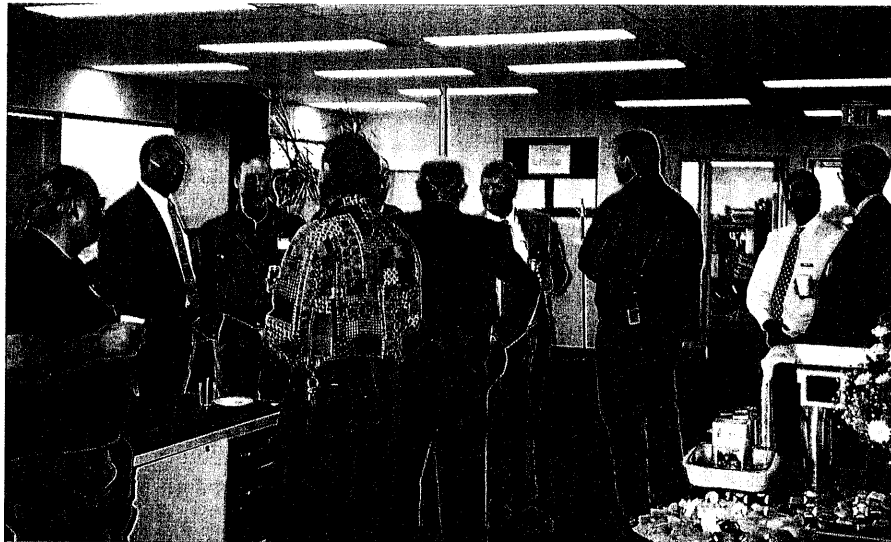
We would suggest that all owners and operators of power boilers and high temperature water boilers examine their relief valve drains and discharge lines to ensure compliance with these sections of the Code, and take appropriate corrective action where necessary.

#### **PLACEMENT OF PENETRIMETERS ARTICLE T277 OF ASME SECTION V**

A number of situations have arisen recently in fabrication shops where NDE personnel have been placing the penetrameters on the film side of the weld being examined when internal access to the vessel has been available. This is contrary to Code requirements. Article T277 of ASME Section V states that penetrameters shall be placed on the source side of the part being examined [see Paragraph T277.1(a)] except for conditions where inaccessibility prevents hand placement of the penetrameters on the source side, the penetrameter shall be placed on the film side in contact with the part being examined [T277.1 (b)]

After consultation with the ASME and NB Team leaders, it has been clearly established that if the completed weld is accessible during any phase of construction - the penetrameter shall be placed on the source side of the part.

Operational difficulties encountered during construction should not be considered as a factor when assessing the relative accessibility for the purpose of placement of penetrameters.



Calgary Open House

#### **ABSA CALGARY OFFICE OPEN HOUSE**

On September 18, 1996 the Calgary Office staff hosted an open house to which ABSA's clients and customers were invited. The ABSA operation relocated from the Alberta Labour offices on March 19, 1996 to the new location at Tower #3, #590, 1212-31 Avenue N.E. Calgary as part of ABSA's move to stand-alone facilities, independent from the Provincial Government.

Approximately 14 employees operate out of the Calgary office location which also serves as our Southern Regional office under the management of Ed Yaremichuk. Calgary personnel are greatly involved in pressure vessel fabricating shop inspections, in-service inspections as well as QC audits and other pressure equipment safety program services.

During the open house we were visited by over 60 representatives from the manufacturing and service industry, contractors, owners of pressure equipment, educational institutions and others.

For this occasion, ABSA employees displayed wall charts high-lighting the program services provided and the relationship between ABSA, Alberta Labour, the Safety Codes Council and industry respecting pressure equipment safety. Much was gained in the discussions between ABSA's clients and ABSA personnel regarding new construction of pressure equipment and the latest inspection

techniques utilized for the purpose of enhancing public safety.

Judging from the supportive comments of the visitors and the enthusiasm shown by ABSA employees, the Calgary Open House was a great success. We would like to thank all of our visitors for taking time out of their busy schedules to come and meet with us.

#### **FIRST ANNUAL PRESSURE EQUIPMENT INDUSTRY CONFERENCE**

The Energy & Natural Resources Department of SAIT, with support from ABSA, is coordinating the First Annual Pressure Equipment Industry Conference scheduled for February 24 & 25, 1997. The conference will be held at the Banff Centre in Banff, Alberta.

Two programs will be running simultaneously to meet the needs of participants.

- ◆ Risked Based Inspection, Repair and Alteration
- ◆ Design, Fabrication and Inspection of new and used vessels

For more information, please call Milt Deck, Energy & Natural Resources Department of SAIT at (403) 284-7118.

#### **Employment Opportunities**

Visit the ABSA Internet e-mail address for current job opportunities.

## GAS DRIPS OR DRIP POTS

Several inquiries were received about "which code, standard or Act do gas drips come under with respect to construction, installation or jurisdiction requirements".

First let us define what these "gas drips" or "drip pots" are. These are vessels commonly used in a gas transmission pipeline, sometimes buried, to remove moisture from the gas. The water collected is then dumped, under pressure to a collection reservoir.

The problem is that some drip pots were built under CSA B51 "Boiler, Pressure Vessel, and Pressure Piping Code" which in turn calls up the requirements of ASME Boiler and Pressure Vessel Code Section VIII, "Rules for Construction of Pressure Vessels" and others were built under CSA Z662 "Oil and Gas Pipeline Systems". Which should it be?

Section 2(1)(c)(iii) of the Alberta Design, Construction and Installation of Boilers and Pressure Vessels Regulations (AR 227/75 with amendments up to and including AR 294/94) exempts gas drips which form part of an installation as defined in the "Pipeline Act" from all pressure vessel provisions of the Safety Codes Act.

Accordingly, gas drips not under the "Pipeline Act" (i.e., if the installation is in a compressor station, gas processing plant or other plant environment under the Safety Codes Act) must be built in accordance with CSA B51 and ASME Code which are adopted as part of the regulations under the Safety Codes Act for the pressure equipment discipline.

Gas drips operating under the "Pipeline Act" fall under the jurisdiction of the Alberta Energy and Utilities Board (AEUB) and CSA Z662 is the adopted code for construction requirements. For clarification of requirements for gas drips under the "Pipeline Act", AEUB offices should be contacted. It should be noted that for CSA Z662, with respect to pressure vessels in general, Clause 1.3(a) of CSA Z662 states that the standard does not apply to design and fabrication of pressure vessels that are covered by appropriate pressure vessel codes.

Over and above code and regulatory requirements, owners and purchasers may have other specifications which will definitely affect the design and construction of this specific class of equipment.

## REPAIRS AND ALTERATIONS INSPECTION REQUIREMENTS

ABSA audits of repair organisations' quality systems have revealed several instances where there was a lack of proper documentation to confirm that an ABSA inspector, or owner/user designated inspector when applicable, had been involved in the repair.

To clearly delineate the responsibility for inspection of repairs and alterations, ABSA has revised the owner/user manual guidelines. A revised ABSA repair and alteration form (Form AB-40), which includes a section for owner/user inspector certification, is now available. Our quality program requirements are based on the principles contained in the ANSI/NB-23 Inspection Code. We believe the Code inspection and routine repair inspection requirements outlined in this article are consistent with ANSI/NB-23.

We will ask repair organizations to amend their quality manuals, at their next renewal date, to describe the process for handling repairs in situations where their client has an ABSA owner/user program Certificate of Authorization, and the repair is performed at an owner/user site.

To ensure that repairs and alterations are completed within the terms of their ABSA Certificate of Authorization, and the Safety Codes Act, owners and organizations performing repairs and alterations should be aware of the following:

### Repairs at Owner/User Controlled Sites

Code inspection requirements (whether an ABSA Inspector or an Inspector designated by the Owner/User Program performs the inspections) shall be established when the contract is initiated. The scope of owner inspection of repairs is defined in the owner/user quality manual. In some cases an owner may be authorized to perform all repair inspections (other than alterations) whereas in other cases the scope of repair inspection performed by an owner/user may be restricted. Also, an owner may elect not to be responsible for the inspection of any repairs.

Code inspections shall be documented on the repair organization's travel sheet and a certified repair/alteration report shall be furnished for all repairs as specified in their quality manual.

The repair/alteration report shall also be certified by the Code inspector unless the repair is classed as routine. If the repair is classed as routine, with owner's acceptance, code inspection may be waived. If code inspection is waived the remarks section of the repair/alteration report shall indicate "ROUTINE REPAIR".

Routine repairs are defined as:

1. Welded repair or replacement of an isolated section of tube or pipe not over 5.563 inches in outside diameter, and their attachments.
2. The addition or repair of non-load-bearing attachments to pressure-retaining parts where post-weld heat treatment is not required.
3. Weld build-up of wasted areas in shells and heads not exceeding 100 sq. inches in area and the lesser of 25% of nominal wall thickness or 1/2 inch in thickness.
4. Corrosion resistant weld overlay not exceeding 100 sq. inches.
5. Welded repairs to treater firetube welds when the repair does not involve replacement of any base metal.

### Repairs at Sites when the Owner does not have an ABSA Owner/User Certificate

An ABSA inspector shall be notified prior to the start of work to accept repair methods and designate any hold and inspection points. When acceptable to the owner and the ABSA Safety Codes Officer, ABSA inspection may be waived for "Routine Repairs" as defined above. In all other instances an ABSA inspector is required to inspect the repair, and certify the repair/alteration report. The repair organisation shall complete a repair/alteration report for all repairs. When code inspection has been waived the remarks section of the repair/alteration report shall indicate "ROUTINE REPAIR" and the report shall be provided to ABSA.

### All Alterations as well as Repairs and Alterations at Shop Facilities

An ABSA inspector shall be notified prior to the start of work to accept repair methods and designate any inspection hold points. An ABSA inspector is required to inspect the repair/alteration and certify the repair/alteration report. The repair organisation shall complete a repair/alteration report for all repairs and alterations and provide the report to ABSA.

**1997 EXAMINATION SCHEDULE**

**Power Engineers**

Edmonton  
 Jan 20-23 Jul 21-24  
 Feb 24-27 Aug 18-21  
 Mar 17-20 Sep 15-18  
 Apr 21-24 Oct 20-23  
 May 26-29 Nov 17-20  
 Jun 16-19 Dec 15-18

Calgary  
 Jan 8 May 7 Sept 3  
 Feb 5 Jun 4 Oct 8  
 Mar 5 Jul 9 Nov 5  
 Apr 9 Aug 6 Dec 3

Red Deer  
 Jan 9 May 8 Sept 4  
 Feb 6 Jun 5 Oct 9  
 Mar 6 Jul 10 Nov 6  
 Apr 10 Aug 7 Dec 4

St. Paul  
 Jan 7 May 6 Sep 3  
 Mar 4 Jul 8 Nov 4

Grande Prairie  
 Feb 7 Jun 5 Oct 18  
 Apr 24 Aug 7 Dec 18

Fort McMurray  
 Jan 21 May 13 Sep 9  
 Mar 11 Jul 15 Nov 18

Medicine Hat  
 Jan 9 May 8 Sep 4  
 Mar 6 Jul 10 Nov 6

Lethbridge  
 Feb 6 Jun 5 Oct 9  
 Apr 10 Aug 7 Dec 4

**Safety Codes Officers**

Calgary and Edmonton  
 Feb 5 Sep 3  
 May 7 Dec 3

Grande Prairie  
 May 7 Dec 3 Sep 3

Medicine Hat  
 May 7 Sept 3

Lethbridge  
 Dec 3

For information regarding the power engineers' and SCO applications, please call ABSA, Examination Section at (403) 433-0281 Ext. 309 or 321

**National Board Commission**

Edmonton  
 Mar 6 & 7 Sep 4 & 5  
 Jun 5 & 6 Dec 4 & 5

**API 510 and API 570**

Edmonton  
 Jun 5 Dec 4

For information regarding the National Board Commission and API examinations, please call ABSA at (403) 433-0281 Ext. 314

**WELDING TEST CENTRES**

Candidates applying to take the Grade B Pressure Welders' Certificate of Competency Examination at one of the ABSA welding test centres should be aware of cancellation and operational policy in regard to these facilities.

Scheduled examination sessions will only be conducted if a minimum five (5) candidates have been booked one week prior; otherwise, the test session will be cancelled. ABSA staff will contact candidates if a test session is to be cancelled and re-book the candidates to the next scheduled session or at a different test centre.

Schedules for examination sessions are available from your nearest ABSA office.

**1997 ANNUAL BILLING**

In preparation for the 1997 annual billing, an inventory listing to all of the owners of boilers and pressure vessels in the Province will be sent out during the first week of December. This listing is intended for owners to compare their actual listing with ours and notify us of any discrepancies. This will help us to ensure that the annual invoices on April 1, 1997 will be as accurate as possible.

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 Fax (403)538-9400

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