

ABSA THE PRESSURE NEWS

Alberta Boilers Safety Association

Volume 9, Issue 1, March 2004



Mr. Ted Seaman



Mr. Warren Fraleigh



Dr. Brian Larson

ABSA's BOARD OF DIRECTORS

2004 will see a number of changes on ABSA's Board of Directors. Ted Seaman, the last of the original board members will step down from the Board in March. Ted joined in 1994 as the Minister's appointee representing the general public on ABSA's five-member board. He has been the Chair of the Board since March 2001. We would like to take this opportunity to thank Ted for his significant contribution and valued leadership.

In December 2003 the Minister of Municipal Affairs, Guy Boutilier, named Warren Fraleigh to represent the general public. Warren has been integrally involved with all aspects of pressure equipment safety for over 20 years. Most recently he was Chair of the Boilers and Pressure Vessels Technical Council. Warren is currently the Business Manager and Secretary Treasurer for the Boilermakers Local Lodge 146.

The other four members are elected by the Board through a 3-member nominating committee process that consists of a Board member, the Assistant Deputy Minister of Municipal Affairs and a member of the public. Following this process, Dr. Brian Larson accepted the invitation to fill the remaining vacancy on the Board effective April 2004. Dr. Larson is Academic and Student Services Vice President for Lakeland College.

We welcome Mr. Fraleigh and Dr. Larson to the Board. They will be joining Gerald Seib, Vice President of Operations, Propak Systems Ltd.; Yves Tremblay, Vice President, Syntech Enerflex; and Owen Baker, Chief Inspector, KeySpan Energy Canada.

The Board elected Mr. Tremblay as Chair of the Board in December 2003. ❖

NATIONAL BOARD SEMINARS BOILER OPERATION AND IN-SERVICE INSPECTION APRIL 2004

As a leader in pressure equipment safety, ABSA is pleased to have the support of The National Board of Boiler and Pressure Vessel Inspectors to conduct two one-day seminars on April 19 & 20, 2004 in Edmonton and April 22 & 23, 2004 in Calgary.

Speakers for the April seminars are Chuck Walters, National Board Assistant Director of Inspections; Robert Schueler, National Board Senior Staff Engineer; Tom Leming, ABSA Examiner & SOPEEC Coordinator; and Bernie Hurst, ABSA Program Development Manager.

The Boiler Operation seminar will benefit personnel involved with heating or power boilers in promoting safety, accident prevention, efficient operation, effective maintenance and also have a better understanding of the Alberta Power Engineers Regulation.

The In-Service Inspection seminar will benefit inspectors by promoting a better understanding of the National Board Inspection Code and Alberta in-service inspection, repair and alteration requirements.

For more information about the seminars and the registration, please visit the ABSA web site www.absa.ca or contact ABSA at

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

FAILURE OF LOW PRESSURE PIPING

During commissioning of a new steam piping system, a weld joint failed and started leaking. The failed weld joint was in a section of piping installed temporarily to facilitate steam blowing. Fortunately, no one was injured in this incident. This piping system was exempt under the Safety Codes Act because one end of the pipe was open to the atmosphere and the operating pressure was below 103 kPa (5 psi).

Piping that is subject to the Safety Codes Act must be designed, fabricated, installed, repaired, altered and inspected according to the regulations and the applicable codes and standards. The regulations do not apply to piping that is exempt from the Safety Codes Act. However, considering the safety of the plant and people, it is imperative that such "exempt" piping, including temporary installations, must also be designed, fabricated, installed, inspected and maintained according to a standard of "good engineering practice".

Good engineering practice generally includes:

- application of common sense, professional knowledge and a structured approach in a consistent manner,
- designing to recognized and approved codes and standards,
- fabricating, inspecting and maintaining to recognized codes and standards,
- selecting and use for the suitable application/service, and
- system designing by professionals who are qualified and experienced in the subject matter.

The potential hazard of the leak in this incident would have been more significant if the leaking fluid were a highly flammable or explosive gas or liquid. An exemption from the Safety Codes Act does not negate the owner's duty of care to ensure good engineering practice is applied. ❖

SANDBLAST POT CLOSURE FAILURE

A 10" diameter "swing-bolt" closure, which was used as the top hatch cover on a sand fill pressure vessel used in a sandblast operation, failed. The closure cover separated from the vessel and was propelled by the release of compressed air in the vessel. It traveled to a point approximately 50 feet away from the vessel. Fortunately, no one was injured in this incident.

The closure was rated for 285 psi and the sandblast vessel rated for 150 psi. The closure was held down by five, 3/8" bolts and nuts. Investigation disclosed that two of the nut/bolt assemblies had failed due to poor condition of the nuts and bolts. The failure of the two bolts allowed the remaining bolts to shift, and lead to the cover's separating from the vessel. Investigation also found that the nut/bolt assemblies had been over-tightened and had sustained tool impact damage prior to the incident. This damage appeared to have been caused by the nut/bolt assemblies' being struck by a wrench or hammer. This damage resulted in the failure of the closure. Following this incident, the owner has included examination of the nut/bolt assembly as part of the operating procedure and inspection record.

It is imperative that owners of similar equipment inspect their closures every time they are opened, for similar deterioration in order to prevent another

NATIONAL BOARD - 73rd GENERAL MEETING

The 73rd Annual General Meeting of the National Board will be held in Nashville, TN, USA in conjunction with the ASME International Boiler and Pressure Vessel Code Committee meetings on May 8-13, 2004.

Eminent featured speakers will make presentations on various aspects of pressure equipment safety. Numerous ASME Boiler and Pressure Vessel Code committee meetings will also be held during the week, including Sections I, III, IV, V, VIII, etc., and the ASME Boiler and Pressure Vessel Main Committee.

For further information, please visit the "infoLink!" Page on the National Board Web site www.nationalboard.org, or call the National Board directly at:

Tel (614)888-8320 or
Fax (614)888-0750. ❖

ASME CODE SEMINARS FOR SECTION IX AND SECTION VIII Div. 1 JUNE 2004

Knowledge of various welding processes and knowledge of quality requirements for construction of pressure equipment is getting more important and is essential in industry. We are pleased to announce that ABSA is partnering with the National Board of Boiler and Pressure Vessel Inspectors to conduct two one-day seminars on June 24 & 25, 2004 in Edmonton and on June 28 & 29, 2004 in Calgary.

Speaker for June Section IX seminar is Richard McGuire, National Board Manager of Training. Speaker for Section VIII Div. 1 seminar is Patrick M. Nightengale, National Board Senior Staff Engineer and Training Specialist.

For more information about the seminar and the registration, please visit the ABSA web site, www.absa.ca, or contact ABSA at (780) 437-9100

INCIDENT REVIEW

A review of fourteen incidents reported to ABSA in the past six months revealed the following root causes:

- Inadequate design procedures
- Inadequate maintenance procedures
- Inadequate operating procedures
- Inadequate monitoring of process conditions

These findings emphasize the need to review and re-validate procedures for design, maintenance and operation of pressure equipment on a regular basis. They also highlight the need to affirm that personnel have been properly trained and their competency verified with respect to those procedures. This can be particularly important when personnel are performing non-routine tasks. For example, if the plant has not been shut down for maintenance recently, then it is beneficial to review the procedures and practices necessary to bring the plant down and make it safe for inspection and maintenance work. Operating response procedures also need to be reviewed and where necessary, revised. Also, the extent of damage in some of the incidents investigated might have been reduced if there had been faster response to upset conditions and alarms.

Along with reviewing procedures and training, instrumentation used to monitor and control processes and to detect leaks and fires must be properly maintained. A system for "Change Management" is required to ensure the continued suitability of instrument systems when process conditions change from the original design parameters.

Under the Alberta Safety Codes Act, the owner is responsible for ensuring that pressure equipment meets the requirements of the Act and regulations, that is it maintained properly, and that any process or activity is done in a safe manner. ❖

ALERTS

In February, the following two Information Bulletins were issued in relation to an incident. The two Alerts are summarized as follows:

- 1 Information Bulletin IB04-002
Alert To Power Boilers Owners/Operators and Equipment Suppliers
Brass Ball Valve Failure in Power Boiler Service

A threaded NPS 2 forged brass ball valve failed while in service as a high-pressure steam boiler blow-off valve. The preliminary findings of the incident investigation indicate the forging brass material specification of the valve was not permissible for boiler external piping application. All power boiler owners and equipment suppliers are asked to review the material specifications of valves and other fittings used in power boiler service and to replace immediately any inappropriate ones when they are found.

- 2 Information Bulletin IB-04-003
Alert To Pressure Equipment Owners and Operators
Rig Boiler Fatality

A worker was checking a rig boiler when a ball valve on the blow-off line came apart, releasing high pressure hot water and steam into the area. The worker received severe burns and later died in hospital. Failure analysis suggests that the ball valve involved in the incident failed as a result of damage caused by water freezing in the valve. With the low temperature conditions in our Province in winter, there is potential for severe damage to pressure-retaining components from the freezing of water or other fluids.

As such, all pressure equipment owners and operators are reminded of the potential safety hazard of pressure equipment subject to freezing of the contained fluid which could result in the equipment's being unfit for pressure service.

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

PRESSURE EQUIPMENT LEGISLATION

Current pressure equipment legislation which was scheduled to expire on March 31, 2004, has been extended to March 31, 2005. This includes the Boilers and Pressure Vessels Regulation (AR 293/1994), the Design, Construction and Installation of Boilers and Pressure Vessels Regulations (AR 227/1975) and the Boilers and Pressure Vessels Exemption Order (AR 300/1994).

The proposed Pressure Equipment Safety Regulation (PESR) has been delayed to address some of the issues raised during public consultation. The PESR, the proposed Exemption Order and the Users Guide were issued for public consultation to over 6000 stakeholders and there were about 20 respondents. Most of the comments were for clarification or editorial. The comments provided good input for some improvements to the regulation and rework of the Users Guide. ABSA and Municipal Affairs developed responses to the public consultation comments.

Two major issues were identified. The jurisdiction between Boilers and Gas disciplines will be addressed by the Boilers and Pressure Vessels Technical Council (BPVTC) and the Gas Technical Council. The exemption for specific vessels on pipelines is being addressed by ABSA and AEUB. ❖

APPLICATION FOR EXAMINATION

I sent in my application yesterday, am I scheduled to write my examination next week?

Power Engineering applications for examination are not fully processed on the day that we receive them. Depending on the number of applications received, there may be up to a two week lag from when an application is received in our office to when we may actually finish processing an application for examination. Applications are processed in the order that they are received and there are a number of checks or evaluations required prior to scheduling a person for an examination. Incomplete information will delay the processing of the application.

All applications for examination are processed at the Edmonton office. When an application for examination is received, the accompanying fee is deposited on the day that it is received. This fee is not placed against the applicant's account until the application is processed by the Education and Certification staff. As such, a cheque's being cashed, or a credit card's being charged, does not mean an applicant has been scheduled to write an examination. It just means that the application has been received in the Edmonton office.

Since all applications are processed in the order that we receive them in the office, the sooner that you apply the better your chance of writing your examination on the date that you request. ❖

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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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