

Highlights From Recent ASME/Alberta Joint Reviews

It should be beneficial for manufacturers preparing for joint reviews to note some of the review elements that have been emphasized, or have caused difficulties, during recent reviews.

Due Process

Since mid-1997, ASME designates have issued a copy of all open deficiencies found by review teams to manufacturers undergoing the joint review. The manufacturer has also been thoroughly apprised by the ASME designate, of the ASME policy on due process and the right to appeal the review team findings.

Engineering and Design

Each page of calculations should bear the revision number, page number and total number of pages. When drawings have been revised, there should be verifiable evidence that calculations have been reviewed for applicability, and if necessary the calculations revised.

Receiving of Materials and Parts

Personnel who are responsible for verifying compliance with material specifications must be aware of the specifications for general requirements for plate (SA-20) and for pipe (SA-530), and that SA-20 contains the limits on unspecified elements for plate.

Demonstration Items

A demonstration of the fabrication process is normally required, at which time the individuals assigning and performing welding tasks are asked to describe how the appropriate welder or operator is selected, how information about the required WPS is conveyed, how materials are identified and traceability maintained, and how welding consumables are controlled.

Nondestructive Examinations

Problems have arisen during joint reviews when subcontracted NDE firms have not adequately addressed the SNT-TC-1A 1992 (adopted by the 1996 Addenda) requirement for examination of Level III personnel or have not included in the documentation available at the review location all of the personnel qualification information listed in the SNT-TC-1A document.

Measuring Devices and Calibration

Verification that measuring devices utilized to fulfill the requirements of UG-90(b)(6) are included in a calibration program is common practice. As part of subcontracting to have impact testing performed, manufacturers should be aware that impact tests and the apparatus shall conform to the applicable requirements of SA-370 (UG-84 and AM-204.1). For calibration requirements, SA-370 references ASTM E-23, which requires annual calibration of impact test machines and semi-annual calibration of temperature measuring apparatus. Are these requirements verified by the manufacturer?

Relocation of Welder Test Centre

The Edmonton Welder Test Centre has been relocated to 11244-120 Street as of January 1, 1998. This new facility is operated and controlled by Alberta Advanced Education and Career Development. All the necessary equipment and supplies required for the Grade "B" Pressure Welder's examination will be supplied by Alberta Advanced Education.

IMPORTANT INFORMATION SEMINAR ON PENDING ASME CODE CASES ON DESIGN FACTORS

Proposed Codes Cases allow for alternative Maximum Allowable Stresses to be based on a factor of 3.5 used for design and construction in accordance with ASME Section I and ASME Section VIII Division 1. These Code Cases are expected to receive ASME approval shortly. One information seminar is planned in Edmonton and one in Calgary to review these Code Cases, their implications and the conditions under which they may be accepted for pressure equipment construction for use in Alberta. The seminars are to be held:

Edmonton

Date: Tuesday, **April 7**
Time: 8:30 am - 11:30
Place: Grant MacEwan College
City Centre Campus
Conference Centre
Room 5-142
10700 - 104 Avenue
Edmonton, Alberta

Calgary

Date: Wednesday, **April 8**
Time: 1:00 pm - 4:00 pm
Place: SAIT*, Orpheous Theatre
1301 - 16 Ave. N.W.
Calgary, Alberta

*Individuals attending the Calgary seminar at SAIT are encouraged to use the LRT because parking is at a premium around that area.

Seminars will be free but space will be limited. Please fax us at (403)437-7787 of your intention to attend by April 1, 1998.

Nameplate Requirements for New Pressure Vessel

Questions are often raised regarding pressure vessel nameplate requirements. The following are some of the most frequently asked questions.

Question:

If I am applying for Alberta Authorization to construct Section VIII Div. 1 pressure vessels, as opposed to an ASME Code stamp in conjunction with Alberta Authorization, what differences are there in marking requirements?

Answer:

With the exception of the application of a Code Symbol Stamp, all marking requirements as described in paragraphs UG-118 and UG-119 are applicable. In all instances there is an additional CSA B51 requirement that the marking include the Canadian Registration Number.

Question:

May any of the markings on a vessel nameplate be painted characters?

Answer:

Because nameplates may be subjected to many conditions (sandblasting, corrosion, painting over, wire brush cleaning, etc.) which would adversely affect surface markings, the Code stipulates that the characters required by the Code must

be either indented or raised at least 0.004 inches. Further to this requirement, the Code states that nameplates may have markings produced by either casting, etching, embossing, debossing, stamping or engraving. Painting is not included in the options permitted by the Code.

Question:

Must the layout of nameplate markings be as illustrated in the Code?

Answer:

Manufacturers are advised that the Code does specify that the stamping shall be arranged substantially as shown in Fig. UG-118 when space permits, and shall be located in a conspicuous place on the vessel. While this statement does imply that there is some small degree of latitude allowed in the arrangement of markings, deviations from the illustrated arrangement are not encouraged. From a practical standpoint, if the Code did not enforce what nameplate information was required and its arrangement, equipment users would be in the unenviable position of guessing at what and where information was conveyed on a particular manufacturer's nameplate.

Clarification of X-Prefixed CRN for Used Equipment

Canadian Registration Numbers with an X-prefix are issued by Design Survey for **used** pressure equipment that does not have a previously issued CRN. In most instances the number is applicable to a singular piece of equipment, however there may be cases where identical items (more than one of the same vessel) could be accepted under one number. Issuing of these CRNs considers the loss of thickness due to corrosion or other mechanisms that has occurred in service before the vessel was brought into Alberta.

There are no situations where an X-prefixed CRN may be utilized for new vessel construction. For all practical purposes the X-prefixed CRN's should be treated like Alberta Limited Designs (ALD's).

Waste Gas Used As Fuel For Boiler

There have been two recent furnace explosions reported in boilers where waste gas was used as fuel. If you are using waste gas as fuel in a boiler or furnace, a thorough review of the system should be carried out on a regular basis. There are a number of factors that should be taken into account when waste gas is used in a boiler installation. These include:

- Is this waste gas corrosive and will it cause valves to fail, seize or leak, thus causing gas buildups?
- Does the waste gas contain

condensables which can remain in headers and create an explosive mixture?

- Is the ratio of waste gas to air that is being conveyed in the headers known? Keeping in mind that if this ratio is in the LEL range, any source of ignition could cause an explosion in the header.
- Are the positions of waste gas valves being monitored?
- Is the flow of waste gas consistent or is it sporadic? If sporadic how is the combustion air in the boiler adjusted?

- Are the fans or blowers supplying the waste gas being monitored? What action is taken should one fail?
- What is the communication network between the area supplying the waste gas and the boiler operators?
- How often are the waste gas valves checked and calibrated? Does this include a bubble test?

Please note that all accidents involving boilers, pressure vessels and piping system subject to the Safety Codes Act must be reported to an ABSA Safety Codes Officer.

News from The National Board

Rupture Disk New Certification Announced by The National Board

After approximately sixty years of certifying safety valves, the National Board is pleased to announce the expansion of its capacity certification program to include the certification of rupture disk devices.

A rupture disk device is a non-reclosing pressure relief device that may be used in combination with pressure relief valves, or as the sole* means of overpressure protection. The technical requirements for design, construction and testing that must be met for certification, will be issued December 31 in the 1997 addenda of the ASME Boiler and Pressure Vessel Code, Section VIII, Division 1, 1995 edition.

Rupture disk device manufacturers who successfully demonstrate their quality system to a National Board representative will be permitted to apply the National Board "NB" mark to

rupture disk devices that have been certified by the National Board Testing Laboratory.

The 1999 edition of the Pressure Relief Device Certifications (NB-18, sometimes referred to as the "Red Book") will include a listing of all rupture disk device certifications and the respective manufacturers.

A detailed article on rupture disk certification will be published in the Winter 1998 National Board Bulletin.

Questions or comments regarding rupture disk certification should be directed to Fred Harrison, Director of the pressure relief department and testing laboratory, via email at harrison@nationalboard.org.

Reprint courtesy of
The National Board

** Rupture disks are generally not permitted as the sole PRD in Alberta.*

National Board Accepted As ISO 9000 Registrar

The National Board is pleased to announce its acceptance by RcA (Dutch Council for Accreditation) as a Registrar of quality systems meeting the requirements of ISO 9000.

As an accredited registrar, the National Board will now be able to provide internationally recognized registration services to boiler, pressure vessel, and safety valve manufacturers who have the intention of becoming "ISO 9000 registered companies".

Except from The National Board Infoletter
Courtesy of the National Board

National Board / ASME - 67th Annual General Meeting

The 67th Annual General Meeting of the National Board of Boiler and Pressure Vessel Inspectors will be held on April 27 - May 1, 1998 in conjunction with the ASME International Boiler and Pressure Vessel Code Committee meeting week in Anaheim, California. The theme of this year's meeting is "Failure is not an Option". Anyone interested in attending should visit the website of the National Board: "<http://www.nationalboard.org>" or contact National Board by phone (614)888-8320 or fax (614)888-1827.

Reporting of Boiler and Pressure Vessel Ownership Changes

In mid-December we mailed out an inventory listing to all owners of boilers and pressure vessels. This list consists of the boilers and pressure vessels that are currently shown as registered under your ownership. If there are any discrepancies, this will provide you with the opportunity to update our records prior to the 1998 annual fee billing which will occur on March 16, 1998.

If you no longer own the vessels(s), the information we require, in accordance with Section 5(4) of the

Boilers and Pressure Vessels Regulation, is as follows:

- (a) the names and addresses of all parties to the transaction,
- (b) the effective date of the transaction,
- (c) the proposed new location of the boiler or pressure vessel, if any, and
- (d) the Alberta identification number assigned by a Safety Codes Officer in

respect of the boiler or pressure vessel.

This will enable us to ensure that the Annual Vessel Registration invoices will be as accurate as possible. Should you require further information, please contact Records Section at:
Tel (403)-433-0281 Ext. 322

Employment Opportunities

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

Valid Power Engineering Certificates of Competency

The Department of Labour initiated the Annual Renewal system with respect to all levels of Power Engineer Certifications in July 1994. The Annual Renewal system requires that each Certificate of Competency is renewed annually. The Safety Codes Act, Engineers' Regulation addresses the renewal in Section 7.1:

(1) If the holder of a certificate of competency fails to pay the annual fee on or before the date specified by the Administrator, the holder no longer holds a valid certificate of competency, but the certificate may be made valid again if the fee in respect of that year is paid and any arrears of fees are paid.

(2) The maximum period for which arrears may be charged under subsection (1) is 5 years.

(3) Notwithstanding subsections (1) and (2), if a certificate of competency has not been renewed for a period exceeding 36 months, the Administrator may require that the holder of the certificate of competency undertake and pass a written examination of the same class as the holder's certificate.

The Alberta Boilers Safety Association receives inquiries on an ongoing basis regarding the validity of Power Engineering and Building Operator

Certificates of Competency. Some issues of validity are addressed above in section 7.1 (1), (2) and (3) of the Engineers' Regulations. However, further in this regard, the following applies:

Any person who has attempted and successfully passed the Province of Alberta examination(s) that leads toward a Power Engineering or Building Operator Certificate of competency, and **neglected** to obtain their Certificate, is considered **not** to hold a valid Certificate of competency. A Certificate must be **obtained** before the person is considered to be the holder of a valid Certificate, and therefore be considered qualified to act pursuant to the Engineers' Regulations.

Any person who has not obtained their Certificate of Competency within 3 years of successfully completing the respective examinations, **may** be required to undertake and pass a written examination, and pay the 3 years arrears, before being issued a Certificate of Competency.

Any person who has not had their Certificate of Competency validated for a period of 5 or more years **will** be required to undertake and pass a written examination, and pay the 5 years arrears, before being issued a Certificate of competency.

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Contents

Join Review Highlights	1
Information Seminar	1
Welder Test Centre Relocation	1
Nameplate Requirements	2
Waste Gas used as Fuel	2
Clarification of X-Prefixed CRN	2
Rupture Disk New Certification	3
NB - ISO 9000 Registrar	3
NB/ASME Annual Meeting.....	3
Reporting of Pressure Vessels	
Ownership Changes	3
Power Engineer's Certificate of Competency	4



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