ABSA
the pressure equipment safety authority

THE PRESSURE NEWS

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ANNUAL CODE UPDATE SEMINAR

The Annual Update Seminar provides an overview of the effects of the Code changes on Designers, Quality Control Inspectors, and other users of the Codes.

This is a one-day seminar and this year's scheduled dates are October 7th in Nisku and October 9th in Calgary.

For more information, please contact Cynthia Formaniuk at 780-437-9100 Ext 3325 or visit www.absa.ca.

ABSA PROVIDES ONLINE ACCESS FOR CERTIFICATE HOLDERS

Power Engineers and In-Service Inspectors can now apply to ABSA to obtain internet access to their personal information that is securely stored in ABSA's database. They are able to view results of examinations, scheduled examinations, certificates held and certificate expiry date. They are also able to submit changes to their address, telephone numbers and email address. Over 400 power engineers and in-service inspectors have already been approved for access.

Future additions to this service may include online renewals, printing examination result letters and scheduling examinations.

To obtain your free internet access to this new service, you will need to provide a written request with your picture ID verified by ABSA staff. This can be done when you write an examination or at the reception desk in an ABSA office. A current email address is required to allow us to approve the access. Once your application has been processed, an access ID and start-up PIN will be sent to your email address. When you first access the site, you will be required to change your PIN and select from a set of security pictures. Your ID, PIN and security picture choice will be required every time you sign on to the information pages. It is your responsibility to keep logon information confidential. More information is available at www.absa.ca. ❖

BOILER OPERATION SEMINAR

ABSA has scheduled a one-day Boiler Operation Seminar for July 8 in Nisku and July 10 in Calgary. This seminar will benefit personnel involved with heating or power boilers in promoting safety, accident prevention, efficient operation and effective maintenance and also in developing a better understanding of codes, standards and regulations governing boilers and related pressure equipment in Alberta.

The seminar will cover boiler explosions, fuel system requirements, boiler piping systems, pressure relieving devices, code requirements and Alberta legislation. The main speaker will be from the National Board of Boiler and Pressure Vessel Inspectors. Alberta Plumbing and Gas will cover fuel system requirements and ABSA will discuss pressure equipment legislation. More information is available at www.absa.ca. ❖

NATIONAL BOARD INSPECTION CODE - 2007 EDITION

The 2007 edition of the *National Board Inspection Code* (NBIC), an American National Standard, has been released. The new Code edition in hard copy format, including three years of addenda, is available from the National Board (https://www.nationalboard.org/NationalBoard/Products/NBIC_Description.aspx). The Code is also available on a CD-ROM and Flash Drive making it very user-friendly for owner-users, repair organizations, contractors and everyone involved in the pressure equipment industry.

The Code looks much different from previous editions, now consisting of three parts covering installation, inspection, and repairs and alterations. Of course, the Code continues to provide the same valuable information as in years past and, indeed, even more so with the added coverage. ❖

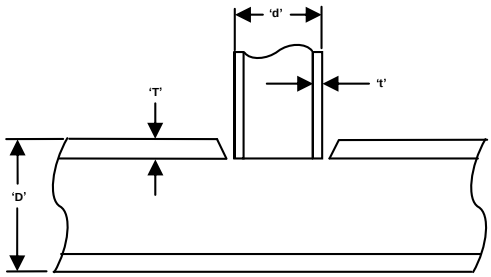
SET-THROUGH AND SET-ON NOZZLE INSTALLATION

Questions are often asked in regard to the welding qualification requirements for the installation of set-through and set-on nozzles. The criteria for the establishing WPS and Welder's qualification requirements for set-through and set-on nozzles had been reviewed in ASME interpretations in the past and are presented here in the form of diagrams for the clarification of the readers:

1. Set-through Nozzle Installation (application to pressure equipment)**:**

WPS:
- Must be qualified to weld thickness 'T'.
- There is no consideration of 'D', 'd' or 't'.

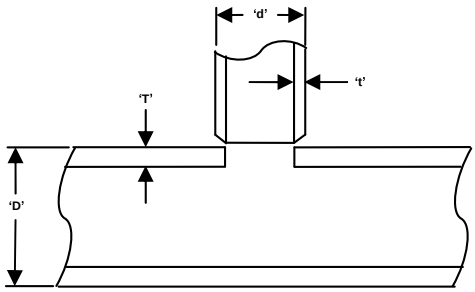
Welder/Machine Welding Operator:
- Must be qualified to weld in the position required and the groove thickness 'T'.
- There is no consideration of 'D', 'd' or 't'.



2. Set-on Nozzle Installation (application to pressure equipment)**:**

WPS:
- Must be qualified to weld thickness 't'.
- There is no consideration of 'D', 'd' or 'T'.

Welder/Machine Welding Operator:
- Must be qualified to weld thickness 't'.
- Must be qualified to weld diameter 'd'.
- Position of welding must also be considered.



The following interpretation of ASME Section IX applies to Set-through and Set-on nozzle installation:

Interpretation: IX-80-67

Subject:	*Section IX, Nozzle to Shell Connections*
Date Issued:	*December 8, 1980*
File:	*BC-80-675*

Question: *When nozzle or branch connections are attached to the wall or head of a pressure vessel, what are the basic criteria establishing procedure and performance qualification requirements, assuming impact test is not a requirement?*

Reply: *Where the nozzle is attached to the vessel by welding completely through the thickness of the vessel wall, the procedure shall be qualified for the thickness of the vessel wall penetrated by the nozzle or attachment. Where additional metal is placed on either the interior or exterior of the vessel wall in the form of fillet welds, they shall be considered as having been qualified by the procedure qualification covering the thickness of the vessel wall. Performance qualification for this weldment may be made in plate to cover the appropriate thickness of the vessel wall and the position in which the weld is being made. Diameter is not a factor.*

Where the nozzle or attachment is welded to the vessel wall by welding through the thickness of the nozzle or attachment, the procedure qualification shall be made for the thickness of the nozzle or attachment wall at the time of welding. Performance qualification for this condition shall be made with the appropriate diameter pipe as required by QW-452.3, with the range of thickness of weld metal qualified determined by the thickness of the nozzle or attachment wall at the time of welding. Any fillet welds, both procedure and performance, will have been qualified when qualifying for the full penetration welds involved.

Note: The above interpretation refers to nozzle attachment to vessels, however the criteria apply to branch attachments to pressure piping as well.

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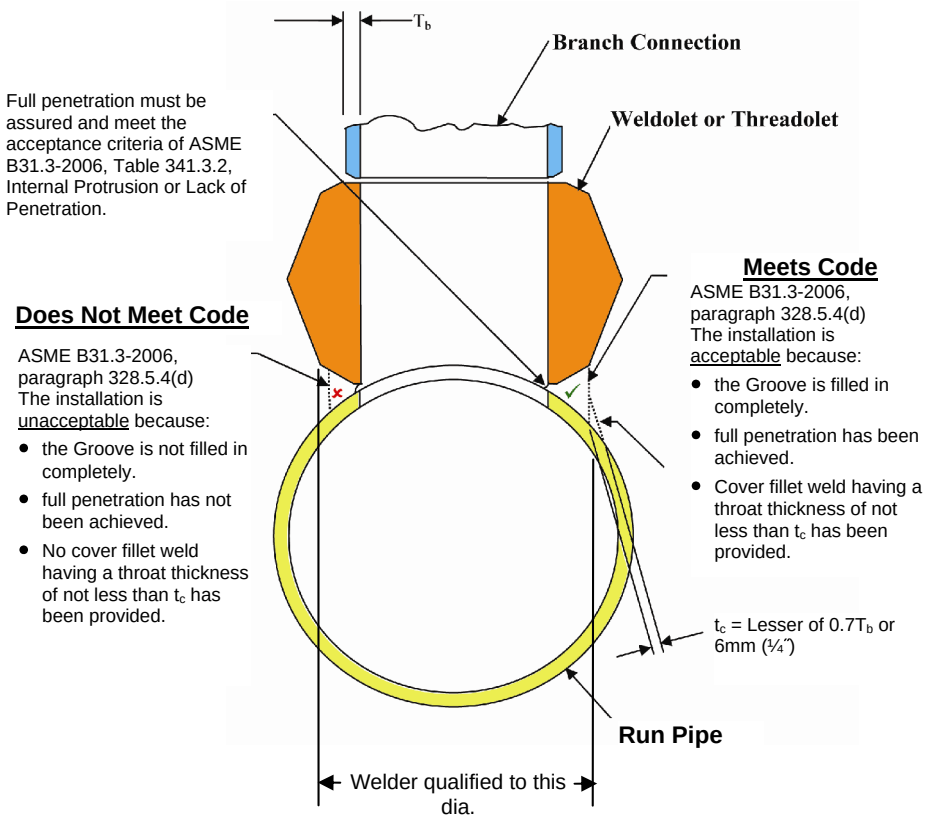
Integrally reinforced branch fitting installation (Set-on application to process piping)**:**



Interpretation: 11-10 in connection with the installation of integrally reinforced branch fitting: (published in ASME B31.3 Interpretations No. 11 covering interpretations issued in 1992)

Subject: *ASME B31.3-1990 Edition, Para 304.3.3 and Appendix H, Reinforcement of Welded Branch Connections*
Date issued: *November 25, 1992*
File: *B31-92-014*

Question: *In accordance with ASME B31.3-1990 Edition, para 304.3.3, may the groove weld attaching an integrally reinforced branch connection fitting to the run pipe be less than fully penetrated, if the depth of the groove is greater than required for adequate branch reinforcement?*

Reply: *No. See para 328.5.4(d)*

This article supersedes a similar article published under the heading 'Small Bore' Qualifications in 'Boilers Branch Pressure Vessel Newsletter' of Number 2, July 24, 1989. ❖

IPEIA - CALL FOR PAPERS

The International Pressure Equipment Integrity Association's (IPEIA) annual conference dates for 2009 is February 11 to February 13 at the Banff Centre in Banff, Alberta, Canada.

IPEIA is soliciting presentations with a focus on the pressure equipment industry and its technologies: presentations that deal with issues of pressure vessel design , plant operations, inspection and maintenance. In particular Case Studies dealing with specific examples, root cause failure analysis, accident / incident investigation and multi-jurisdictional concerns.

For further information, please contact the Conference Administrator, Kelly Jaskow at jaskow@shaw.ca or visit www.ipeia.com. The deadline for submission is no later than Friday, August 1, 2008. ❖

PRESSURE VESSELS REGISTERED AS CATEGORY "H" FITTING

Registration of designs is provided for under the Alberta Safety Codes Act and Clause 4.1 of CSA B51 Code, which is adopted as part of the Pressure Equipment Safety Regulation (AR 49/2006) under the Act.

Under the CSA B51 Code, within certain pressure/volume and service limitations as provided by Figures 1(a), (b) and (c) and Table 1 of the Code, it is possible to register some relatively small pressure vessel designs under Category "H" fitting. However, it should be noted that irrespective of the CSA B51 provisions, Section 5(1) of the Pressure Equipment Safety Regulation requires that certain "*types of pressure vessels, regardless of volume, must meet all the requirements for pressure vessels in the Regulation*", part of which would include registration of the designs as pressure vessels. These include autoclaves, steam jacketed kettles, ..etc., details for which can be found in the Regulation and the PESR User Guide on ABSA's website (http://www.absa.ca/ActAndRegs.aspx).

For the small pressure vessels which may be registered as Category H fittings, this allows for expediency in the design registration administration process. However, it is important to remember that registration as Category H fittings does not remove the fact that these are pressure vessels and thus, the pressure vessels must comply with all the provisions of Clause 7 of the Code for the design and construction of pressure vessels.

It should also be clearly understood that when pressure vessel designs are registered as Category H fittings, the manufacturer may provide the shop inspection in place of an Authorized Inspector during the manufacturing of the pressure vessels (as provided under Figures 1(a), (b) and (c) of the CSA B51 Code) only if and when the manufacturer has demonstrated "*to the regulatory authority that a satisfactory quality control system is in operation*" as provided for under Clause 4.9 of the Code.

The provision under Figures 1(a), (b) and (c) for the Manufacturer, and not the Authorized Inspector, to provide shop inspection for Category H fitting is similar to the exemption of individual shop inspection by the Authorized Inspector under Clause 4.8.2(c) of the CSA B51 Code *"for miniature pressure vessels as defined in ASME Section VIII, Division 1 of the ASME Code"*. Thus, in general, for pressure vessel designs registered as Category H fittings, particularly if the vessels are manufactured outside of Canada, shop inspection of these vessels will likely have to be conducted under Clause 4.8.1 by an Authorized Inspection Agency.

Please contact ABSA's Design Survey Department if further clarification and details for design registration are required. ❖

CLEARANCE AROUND BOILERS & PRESSURE VESSELS

With the rapid growth in Alberta's economy, construction activities in downtown offices, expansions to retail space, and accommodation are proceeding at a frenzied pace.

In building construction, designers must consider and apply various codes and standards for architectural, civil, building, electrical and plumbing requirements. However, the CSA B51 *Boiler, Pressure Vessel and Pressure Piping Code* with regard to the installation of boilers or pressure vessels is very often overlooked. As a result, the boiler or the pressure vessel is frequently stuck in the corner in the basement or crowded together with other equipment in a mechanical room.

The Code requires that a passageway at least 0.6m (2ft) wide and clear of all obstructions shall be provided on both sides and at the rear of each boiler or pressure vessel. Where necessary, this clearance shall be increased to facilitate removal or opening of closures, casing or covers.

Adequate clearance is also necessary between the floor and the lowest insulated surface of a boiler or pressure vessel to facilitate inspection or repair. A minimum clearance of 300mm (12in) is recommended. ❖

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