

Formal Interpretations/ Interprétation formelle

This section lists questions that individuals have submitted about a particular standard. Each question has been reviewed and answered by the appropriate committee. If you would like to submit a question about a particular standard, please see the end notes in the preface of that standard.

Posted November 11, 2013

The following interpretation regarding CSA Standard CAN/CSA-Z19901-2-07 (R2011), *Petroleum and Natural Gas Industries - Specific Requirements for Offshore Structures - Part 2: Seismic Design Procedures and Criteria* (adopted ISO 19901-2:2004, first edition, 2004-11-15, with Canadian deviations), Clause(s): 6.2.1, has been approved by the Technical Committee on Design, Construction and Installation of Offshore Structures:

In Section 6.2.1, General, it is stated that: "...The target annual probability of exceedance of the seismic hazard considered in the site-specific hazard analysis shall be *in the range of* 10^{-4} to 10^{-3} for the design of structures of exposure levels L1 and L2."

Question: (a) Does this mean that the target annual probability of exceedance of 10^{-4} is valid for exposure level L1, and 10^{-3} is valid for exposure level L2, or does it mean that the range applies for both exposure levels?

Answer: Seismic WG Reply: It is not the intent of the provision that the target annual probability of exceedance of seismic hazard 10^{-4} be applied only for exposure level L1 and 10^{-3} for exposure level L2. The range 10^{-4} to 10^{-3} applies to both exposure levels L1 and L2 with appropriate target probability selected based on demonstrated consideration of safety.

Question: (b) Would a return period lower than 10,000 years be acceptable for exposure level L1 according to the Canadian National Annex as long as the calculations comply with the main body of the ISO Z19901-2-07 standard?

Answer: Seismic WG Reply: A return period lower than 10,000 years would be acceptable if it can be demonstrated that the level of safety achieved is equivalent to that required by the Canadian Deviation of Clause 6.2.1 of CAN/CSA Z19901-2.

Posted October 29, 2013

The following interpretation regarding CSA Standard N289.3-M81, *Design Procedures for Seismic Qualification of CANDU Nuclear Power Plants*, Clauses 6.3.3.1 and 6.3.3.2, has been approved by the Technical Committee on Seismic Design (N289):

Question 1: Does the statement "Seismic fatigue analysis of components and supports is not required when the range of primary plus secondary stresses due to the seismic load alone is limited to" 2Sy (i.e. elastic) meet the intention on Clause 6.3.3.1 of N289.3-M81?

Answer 1: Yes

Question 2: When performing an evaluation of the fatigue damage accumulated during a seismic event, does the use of the fatigue curves taken from Code Cases, or derived through the same methods of those of “Figures 1-9.0 of ASME Code III” (i.e. factors of 2 on stress and 20 on cycles to mean failure curves), for those materials, code cases, and methodology used to derive the fatigue curve approved by the AHJ, satisfy the requirements of Clause 6.3.3.2?

Answer 2: Yes

Posted October 29, 2013

The following interpretation regarding CSA Standard N285.0-08, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants*, has been approved by the Technical Committee on CANDU Nuclear Power Plant Systems and Components (N285A):

Question 1: Is it the intent of N285.0-08 that Clauses A.1.3 to A.1.6 apply to only those systems, sections of systems, tanks, and supports that require classification as defined by Clause A.1.2?

Answer 1: Yes

Question 2: Is it the intent of N285.0-08 to allow the use of the applicability criteria in B51 to determine the registration requirements for components in a Class 6 process system?

Answer 2: Yes

Posted August 16, 2013

The following interpretation regarding CSA Standard Z662-11, *Oil and gas pipeline systems*, Clause 7, has been approved by the Technical Committee on Petroleum and Natural Gas Industry Pipeline Systems and Materials (Z662):

Question 1(a): Are welding inspector(s) required where piping is being arc or gas welded assuming that the welding is:

- not in service;
- 100% of the welds are non destructively tested by radiographers qualified in accordance with 7.14.8.1 or ultrasonic inspectors qualified as required in 7.15.6; and
- the non destructive testing method used is capable of detecting any imperfections on the outside surface of the piping?

Answer: No

Question 1(b): Is it permissible, for a contractor’s crew, who has a person competent in visual inspection and whose qualifications are approved by the company, to perform any visual inspection required by clause 7.10.2.1 or clause 6.5?

Answer: Yes

Posted August 16, 2013

The following interpretation regarding CSA Standard Z662-11, *Oil and gas pipeline systems*, Clause 10, has been approved by the Technical Committee on Petroleum and Natural Gas Industry Pipeline Systems and Materials (Z662):

Question: Clauses 10.10.2.7, 10.10.4.2, 10.10.5, 10.10.6 and 10.10.7 allow for the applicable defect to be accepted on the basis of an engineering assessment. Is it permissible to complete the engineering assessment using only the imperfection size, shape, etc provided by the ILI tool?

Answer: No

Posted August 16, 2013

The following interpretation regarding CSA Standard Z662-11, *Oil and gas pipeline systems*, Clause 8.1.2, has been approved by the Technical Committee on Petroleum and Natural Gas Industry Pipeline Systems and Materials (Z662).

Question 1(a): Could Clause 8.1.2 be interpreted to mean that the system must be tested in place and could only be tested otherwise under the conditions specified in Clause 8.4?

Answer: No

Question 1(b): If the response to question 1 a) is no, is the intent of Clauses 8.1.2 and 8.4 to allow testing in a fabrication shop where it is not “practicable” to do it in the field?

Answer: Yes

Posted August 16, 2013

The following interpretation regarding CSA Standard Z662-11, *Oil and gas pipeline systems*, Clauses 5.1.2, 5.1.3, 5.2.5 and Table 5.3, has been approved by the Technical Committee on Petroleum and Natural Gas Industry Pipeline Systems and Materials (Z662).

Question 1: Is it permissible to install Category I butt welding fittings manufactured to the requirements of ASME B16.9-2007, with the materials being in accordance with either of the following material specifications:

- i. ASTM A 234 WPB
- ii. ASTM A 420 WPL6

Answer: Yes. Note limitations 10, 11 and 19.



Question 2: If the answer to the question 1 is no, is it permissible to install the fittings described in question 1 if an engineering assessment as described in CSA Z662 clause 5.1.3 is performed and the assessment shows that the fitting is suitable for its proposed use?

Answer: Not applicable.

Question 3: Is it permissible to install Category I forged fittings, socket welding and threaded, manufactured to the requirements of ASTM A105 or ASTM A350, with the dimensions and pressure ratings being in accordance ASME B16.11 if an engineering assessment as described in clause 5.1.3 is performed and the assessment shows that the fitting is suitable for its proposed use?

Answer: Yes. Other aspects of Z662 must also be taken into consideration.

Posted August 16, 2013

The following interpretation regarding CSA Standard Z662-11, *Oil and gas pipeline systems*, Table 5.3, has been approved by the Technical Committee on Petroleum and Natural Gas Industry Pipeline Systems and Materials (Z662).

Question: Is it permissible to use MSS SP-44 flanges manufactured using ASTM A694 or A707 material?

Answer: Yes.

Posted August 16, 2013

The following interpretation regarding CSA Standard Z662-11, *Oil and gas pipeline systems*, Clause 7.13.1, has been approved by the Technical Committee on Petroleum and Natural Gas Industry Pipeline Systems and Materials (Z662).

Question 1: May radiographic images obtained through conventional film techniques be digitized and weld evaluation be made using these digitized files?

Answer: No.

Question 2: May radiographic images obtained through conventional film techniques be digitized and digitally manipulated to correct for noncompliance, e.g. incorrect density or inadequate sensitivity?

Answer: No.



Question 3: Is the intent that the digital radiography procedure be compliant with the requirements ASME V Article 2 Mandatory Appendix 3?

Answer: No. See Clause 7.13.2.

Posted August 2, 2013

The following interpretation regarding CSA/ASME harmonized Standard ASME A112.18.1-2012/CSA B125.1-12, *Plumbing Supply Fittings*, Clause 5.3.2, has been approved by the Technical Committee on Plumbing Fittings (B125) and the ASME Plumbing Standards Committee:

Question 1: Should the burst pressure test (Section 5.3.2 of ASME A112.18.1-2012/CSA B125.1-2012 Plumbing Supply Fittings) be performed on each inlet independently?

Answer 1: The recommended response from the ASME/CSA JHTG is: **NO**

Question 2: If there is more than one inlet, should the total pressure of 500 psi be applied to all inlets simultaneously?

Answer 2: The recommended response from the ASME/CSA JHTG is: **NO**

Posted August 1, 2013

The following interpretation regarding CSA Standard N289.3-10, *Design procedures for seismic qualification of nuclear power plants*, Clause 7.3.4 (c)(iv), has been approved by the Technical Committee on Seismic Design (N289):

Question: Does the 2/3 factor option apply for stresses induced by seismic anchor movements, which are applied via equation 13A of ASME B31.1-2007?

Answer: Yes

The following interpretation regarding CSA Standard N289.3-10, *Design procedures for seismic qualification of nuclear power plants*, Table 3, has been approved by the Technical Committee on Seismic Design (N289):

Question: Is it the intent that the data in Table 3 is independent of the frequency of the primary system?

Answer: Yes

Posted July 17, 2013

The following interpretation regarding CSA Standard N293-07 (R2012), *Fire protection for CANDU nuclear power plants*, Clause 7.4.1(a), has been approved by the Technical Committee on Fire Protection in CANDU Nuclear Power Plants (N293). **Note:** *This RFI also relates to the N293-12 edition due to the standard editions having the exact same wording.*

Question 1: Is the intent of Clause 7.4.1

- a) that the fire detection systems, required to be seismic category A, are not required to function during and after an earthquake but the SSC(s) mounting(s) are sufficient to maintain the SSC in the original mounting configuration; and
- b) that components contained within cabinets or panels are not required to maintain the original mounting configuration within the panel or cabinet as long as the panel containing the components continues to contain the components and the panel retains its original mounting configuration during and after an earthquake?

Answer: Yes

Question 2: Is the intent of Clause 7.4.1

- a) that the fire suppression systems, required to be seismic category A, are not required to function during and after an earthquake but the SSC(s) mounting(s) are sufficient to maintain the SSC in the original mounting configuration; and
- b) that it is required that the pressure boundary integrity of the SSC be sufficient to contain the contents of the SSC within the pressure boundary during and after an earthquake?

Answer: Yes

Posted June 13, 2013

The following interpretation regarding CSA Standard N291-08 (R2013), *Requirements for Safety-Related Structures for CANDU Nuclear Power Plants*, Clause 6.3.3.3(c), has been approved by the Technical Committee on Concrete Containment and Safety-Related Structures (N287/N291):

Question: For concrete structures designed in accordance with CSA N291-08 (i.e. safety related concrete structures excluding the containment structure):

- a. Is the requirement of the extreme fibre strains in CSA N287.3-93 Clause 7.2 required by N291-08 Clause 6.3.3.3(a) limited to the specified yield strain of the reinforcement only for the extreme tension fibre?
- b. Does CSA N287.3-93 Clause 7.2 required by N291-08 Clause 6.3.3.3(a) mean the maximum strain at the extreme concrete compression fibre shall be limited to the same yield strain specified in the extreme tension fibre?

Answer:

- a. No. Both tensile and compressive strains are limited at extreme fibre regardless of where the reinforcement is.
- b. Yes.

Posted June 13, 2013

The following interpretation regarding CSA Standard N291-08 (R2013), *Requirements for Safety-Related Structures for CANDU Nuclear Power Plants*, Clause 6.3.3.3(a), has been approved by the Technical Committee on Concrete Containment and Safety-Related Structures (N287/N291):

Question: For steel structure designed in accordance with CSA N291-08 (i.e. safety related steel structures), does CSA N291-08 Clause 6.3.3.3 (c) mean that Class 1 and 2 sections have to be designed using the elastic section modulus to calculate moment resistance rather than the plastic section modulus?

Answer: Yes. The structure shall respond elastically.

Posted May 28, 2013

The following interpretation regarding CSA Standard N285.0-08/N285.6 Series-08, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants/Material Standards for reactor components for CANDU nuclear power plants*, Annex F, Clause F.3(e), has been approved by the Technical Committee on CANDU Nuclear Power Plant Systems and Components (N285A):

Question: Is it the intention of N285.0 (2008) Annex F, Clause F.3(e) to exempt from registration hydraulic piping systems which drive hydraulic actuation devices (mechanical actuators, motors, cylinders, etc) for temperatures not exceeding 65°C (150°F)?

Answer: Yes.

Posted May 28, 2013

The following interpretation regarding CSA Standard N285.0-06, *General requirements for pressure-retaining systems and components in CANDU nuclear power plants*, Clauses 5.2.8 and A.1.6.1, has been approved by the Technical Committee on CANDU Nuclear Power Plant Systems and Components (N285A):



Question: In determining the classification of a system or a section of a system do the requirements of Clause 5.2.8 and A.1.6.1 of CSA N285.0-06 Update No.1 require the accumulation of radionuclides in deposits on the inside of a component or section of the system be considered?

Answer: No.

Posted May 16, 2013

The following interpretation regarding CSA Standard D250-12, *School Buses*, has been approved by the Technical Committee on School Buses:

Question: Is it OK for the positive door opening device to require action beyond the specified 90 degrees to engage? Some devices require 135 degrees (+/5) of swing to activate. Is failure to positively activate at the specified 90 degrees contrary to the D250 requirements?

Answer: CSA D250 section 6.9.2.2 (b) requires every emergency exit door to be equipped with a 'positive door-opening device that maintains the door in an open position at a minimum of 90° from the bus body'. The intent of this section is to ensure that positive door opening device will hold the door open a minimum of 90 degrees so that it will not block the door opening in the event of an emergency.

The positive door-opening device shall must engage 'without the need for action beyond opening the door past the 90° minimum from the bus body'. The device must operate without the need for additional tools (eg. pins) or procedures. Basically, an emergency door must automatically latch open at 90 degrees or greater, when the door is opened past 90 degrees.

Question: As only 2 WC can be position on a bus so how can a position be INBOARD, does it make reference on a position just beside the lift? Please confirm that seat belts are only required for WC and not for passenger using a seat?

Answer: CSA D409 compliant bus configurations allow for the installation of three (3) wheelchair positions in a single row across the width of the bus (especially on a 102" body).

Based on section 7.6.3.1 the two 'outboard' positions would require a Type 2 lap/shoulder belts and the single 'inboard' seating position would require either a Type 2 lap/shoulder belt or a Type 1 lap belt (regardless of chair lift position).

Also, in response to your question "Can you confirm that seat belt are only required for WC and not for passenger using a seat?". You are correct, seatbelts are only required on wheelchair positions, since these positions are not compartmentalized (no CMVSS 222



occupant protection/restraint). All ambulatory passenger seating is provided 222 seating and does not require a seatbelt.

Question: 7.1 says the accessible bus must meet clause 7 as well as meeting clauses 4 thru 6. Does the D250 Technical Committee agree that 7.8 is not a requirement of an accessible bus? There are a lot of conditions that could be defined as disability and it is not easy for the manufacturer to determine except when the customer know it's real needs.

Answer: CSA D250-12 section 7.8 states that a seatbelt is required for each seat 'designated for use by a person with a disability'. The key word is 'designated'...the operator can designate the number of seats for such a purpose and order the bus with the appropriate number of seats with seatbelts.

The number of locations cannot be determined by the manufacturer and therefore it is up to the operator to order the appropriate number of seat belts.

Question: Pertaining to standard D250, we are inquiring whether the current standard requires that the school bus hood be painted solely (ref Clause 5.4.3), or can alternate application technologies be approved by the CSA Technical Committee that meets or exceeds the colour, performance and gloss requirements of this standard for future applications.

Answer: CSA D250 section 5.4.3 requires 'all outside surfaces, except glazing materials, that are in the direct line of vision of the seated driver to be painted lustreless black'. Painted means that the surface has been covered with paint, which is generally defined as a 'liquid phase solution or suspension consisting of pigment, binder and a solvent'. This precludes the use of vinyl decals/wrap. However, all other outside trim not in view of the driver, including bumpers and rub rails, may be covered with black vinyl wrap in accordance with Colour Number 512-101 of CGSB 1-GP-12c or Colour Number 17038 of FED-STD-595C.

Posted May 3, 2013

The following interpretation regarding ASME A112.19.5-2011/CSA B45.15-11, *Flush valves and spuds for water closets, urinals, and tanks*, Clause 6.2.2, has been approved by the Technical Committee on Plumbing Fixtures (B45) and the ASME Plumbing Standards Committee:

Question: Do the requirements in Clause 6.2.2 of ASME A112.19.5-2011/CSA B45.15-11 apply to OEM flush valves (i.e., the valves that come with toilets when they are first sold)?



Rationale: Section 9.3.4 of ASME A112.19.2-2008/CSA B45.1-08 requires that flush valve markings be on the water closet tank; requiring markings on the flush valve itself is redundant.

Answer: No.

Posted May 3, 2013

The following interpretation regarding CSA Standard N286-05, *Management system requirements for nuclear power plants*, has been approved by the Technical Committee on Management Systems (N286):

Question: Is it the intent of the Standard to preclude identification of status via electronic means?

Answer: No. The intent of the Standard is that the requirement for document control may include electronic identification of status associated with that document.

Posted March 22, 2013

The following interpretation regarding CSA/IAPMO harmonized standard CSA B45.5-11/IAPMO Z124-2011, *Plastic plumbing fixtures*, Clause 4.4.3, has been approved by the Technical Committee on Plumbing Fixtures (B45) and the IAPMO Plumbing Standards Committee:

Question: Is an overflow hole required on a bathtub?

Answer: Yes.

Posted March 19, 2013

The following interpretation regarding CSA Standard Z662-11, *Oil and gas pipeline systems*, Clause 4.11, has been approved by the Technical Committee on Petroleum & Natural Gas Industry Pipeline Systems and Materials:

Question 1: If we follow the Standard in appropriately protecting the pipelines, can reduced clearance be used?

Answer 1: Yes. See Clauses 4.11.2 and 4.11.3.

Question 2: If not, what is the minimum clearance that can be achieved?

Answer 2: Not applicable.



Question 3: Does CSA Z662 address application and approval processes?

Answer 3: No.

Posted March 1, 2013

The following interpretation regarding CSA/ASME harmonized Standard ASME A112.18.1-2011/CSA B125.1-11, *Plumbing Supply Fittings*, Clause 6.3.2(b), has been approved by the TC on Plumbing Fittings (B125) and the ASME Plumbing Standards Committee:

Question: Is the statement from ASME A112.18.1/CSA B125.1, Clause 6.3.2(b) that requires the wording “For use with automatic compensating valves rated at xxx L/Min (yyy gpm) or less” required for ALL shower heads and hand-held showers regardless of the flow rate (since this section is not prefaced by any indication of high-efficiency models)?

Rationale: We recently ran into a situation regarding one of our showerheads failing a retailer’s inspection test because our packaging did not have the statement from ASME A112.18.1/CSA B125.1, Clause 6.3.2(b) that requires the wording “For use with automatic compensating valves rated at xxx L/Min (yyy gpm) or less”. Our shower model flows at 2.5 gpm. Since 1994 when the Dept. of Energy mandated that showerheads flow no more than 2.5 gpm, hot water crossover has been less of an issue with these full flow (2.5 gpm) showers than the more recent high-efficiency showers. We can certainly see the need for this statement with the new low-flow showerheads, but not necessarily with the 2.5 gpm models.

Answer: Yes.

Posted February 4, 2013

The following interpretation regarding CSA Standard N293-12, *Fire protection for nuclear power plants*, Clause 6.8.3.2, has been approved by the Technical Committee on Fire Protection in CANDU Nuclear Power Plants (N293):

Question 1: Since the ULC class 1, ULC class 2 distinction has been removed and replaced with a single designation of meeting the combustibility requirements of ULC-S111 in the proposed changes contained in the draft 5th edition of CAN/ULC-S111, does the CSA N293 Technical Committee consider that once the new edition is issued, air filters meeting the combustibility requirements of the 5th edition of ULC-S111 to be in compliance with CSA N293-07 Clause 6.8.3.2?



Answer 1: Yes. Because the CAN/ULC-S111 standard has eliminated the Class 1 and Class 2 designations in the next edition, it is appropriate to revise N293-07 Clause 6.8.3.2 as follows:

6.8.3.2

Air filter media (excluding charcoal filters and high-efficiency particulate air [HEPA] filters) used in air-handling systems shall meet the ~~combustibility~~ requirements of ~~Class 1 in accordance with CAN/ULC-S111~~.

Question 2: Given the changes implemented in ANSI/UL 900, does the CSA Technical committee consider UL classified air filters conforming to UL 900 to be in compliance with CSA N293-07 Clause 6.8.3.2?

Answer 2: No. There is no need to introduce another foreign Standard for referencing. These Standards have not undergone any harmonization process.

Posted January 10, 2013

The following interpretation regarding CSA Standard CAN/CSA-Z662-11, *Oil and gas pipeline systems*, Clause 4.3.7, Table 4.2 and Note (3) have been approved by the Technical Committee on Petroleum & Natural Gas Industry Pipeline Systems and Materials (K110).

Question 1: Is it the intent that the location factors (L) referenced in Clause 4.3.7 and specified in Table 4.2 modify the overall ~~factor of safety~~ utilization factor ($F \times L \times J \times T$):

- for facilities in accordance with the service fluid and class location?
- in higher potential consequence areas based on class location?
- in higher potential consequence areas based on potential environmental consequence?
- at a station location as there is a higher potential for a worker related consequence than the “General” application category?
- at a station location to compensate for stresses and strains that could be found in station piping?

Answer 1: No response provided, as question was withdrawn by the submitter.

Question 2: Would the station location factors (L) referenced in Clause 4.3.7 and specified in Table 4.2 apply to:

a) station piping conducting the service fluid that is located between station isolation valves (see the attached diagram Figure 1)?

Answer 2: Yes.

b) a mainline pipeline segment that is connected upstream or downstream of any station isolation valve(s) that is located:

a. within the station fencing but outside of the station area (see mainline pipeline “X” in Figure 1); or

Answer 2: No.

b. within the station area (see mainline pipeline “X” in Figure 2).

Answer 2: No.

c) a pipeline segment that is connected upstream of a station isolation valve that traverses:

a. station piping, facilities, buildings or equipment (see pipeline “Y” in Figure 3); or

Answer 2: No.

b. a station area.

Answer 2: No.

d) a pipeline that traverses a station area but is not connected to the station piping or facilities, and is also operated to the CSA Z662-11 standard (see pipeline “Y” in Figure 4):

a. where pipeline X and Y are owned by the same company; or

Answer 2: No.

b. where pipeline X and Y are owned by separate companies.

Answer 2: No.

Posted January 10, 2013

The following interpretation regarding CSA Standard CAN/CSA-Z662-11, *Oil and gas pipeline systems*, Annex I has been approved by the Technical Committee on Petroleum & Natural Gas Industry Pipeline Systems and Materials (K110).

Question: For the purposes of welder performance qualification testing, is the intent of Annex I to permit the substitution of similar P-Number materials (listed in Table 7.1 and QW-422) as provided in ASME?

Answer: Yes.