

Information Bulletin No. IB11-013

August 05, 2011

Use of ISO 16528 in Alberta

Introduction

The Pressure Equipment Safety Regulation (PESR) has been amended through Alberta Regulation AR138/2011.

With the amendment, a new Section 6(k) has been introduced to the PESR with the adoption of the ISO 16528 Standard whereby

“ISO 16528 Boilers and Pressure Vessels Part 1, 1st Edition, 2007 for construction not addressed in the above codes and standards provided the same engineering philosophy, safety margins and administrative requirements in CSA B51 are followed”.

Use of ISO-16528 in Alberta

It is stated in the PESR amendment that ISO 16528 may be used for *“construction not addressed in the above codes and standards provided the same engineering philosophy, safety margins and administrative requirements in CSA B51 are followed”*. Accordingly, for construction of boilers and pressure vessels (and components forming parts thereof) that is addressed by one or more of the adopted codes and standards listed under Sections 6(a) to 6(j) of the Pressure Equipment Safety Regulation, the applicable listed adopted code(s)/standard(s) must be used.

However, for the construction of a boiler or a pressure vessel (or a component forming a part thereof) for use in Alberta not addressed by any of the codes and standards adopted under Sections 6(a) to 6(j)), a code or standard in conformance with ISO 16528 may be used in accordance with the new Section 6(k) of the PESR. A couple of examples of construction of this nature would include such things as lateral Y's or full face gasket flanges forming part of the design of a boiler or a pressure vessel. If and when ISO 16528 is used, one must keep in mind that *“the same engineering philosophy, safety margins and administrative requirements in CSA B51”* must be followed.

A person wishing to make use of the provision under Section 6(k) of the PESR will have to submit the design for registration along with additional information compared to the information required for normal design registration applications. The design submission shall indicate and provide confirmation the design code or standard conforms to ISO 16528. Evidence of material specifications, design margins, provision of Authorized Inspector verifications, manufacturer's data reports, among others, will be required in the design submission to provide proof of application of the *“same engineering philosophy, safety margins and administrative requirements”* to the CSA B51 Code (and the ASME Code which is referenced in CSA B51) being part of the construction.

The design submission will be subject to the design review process and if found acceptable, the design will be registered and a design registration number will be issued.

Background - A brief overview of ISO-16528 and associated codes and standards

The International Organization for Standards (ISO) is supported by countries all over the world including Canada. The ISO have published some 18,000 standards and ISO16528 Part 1 - 2007 Boilers and Pressure Vessels was published in 2007. Canada is a voting member of the ISO Technical Committee ISO/TC11 which helps to develop and maintain the ISO 16528 Boilers and Pressure Vessels Standard.

The ISO 16528 Part 1 2007 is a performance-based boiler and pressure vessel standard. It establishes "*performance requirements for the construction of boilers and pressure vessels*". A standards-development organization may submit evidence to ISO/TC 11 respecting a boiler and pressure vessel which "*includes requirements that address the failure modes in accordance with Clause 6 of ISO 16528-1*" and "*adequately addresses the requirements specified in Clauses 7 and 8 of ISO 16528-1*". When the national or international standard is deemed to conform to the ISO 16528 standard, its title will be included for publication in the listing on the official website of ISO/TC11. It is important to note that "*the publication on the ISO/TC 11 website does not imply adoption of the standard as an ISO standard, nor approval by ISO of the detailed technical requirements*".

A number of national/international standards have since applied for and are now accepted for inclusion in the publication list on the ISO/TC 11 website. These standards include the ASME Boiler and Pressure Vessel Code Sections I, IV and VIII (Divisions 1 and 2) of US; CODAP 2005 of France; JIS B8265 of Japan; PD 5500 of UK; AS 1228 of Australia; AD 2000 of Germany; CEN 1344 of EU; and CSA B51-09 of Canada.

<original signed by>

K. T. Lau, Ph.D., P.Eng.
Chief Inspector and Administrator
Pressure Equipment Safety