CANADIAN STANDARDS ASSOCIATION

Z245.15-09

Steel valves

Contents

Preface

This is the seventh edition of CSA Z245.15, *Steel valves*. It supersedes the previous editions published in 2005, 2001, 1996, 1991, 1987, and 1981.

This Standard covers the requirements for steel valves intended to be used for transporting fluids as specified in CSA Z662.

Changes to this edition include the following:

(a) the definition of pressure-containing parts has been revised to include stems and shafts and definitions for stems and shafts were added;
(b) material and mechanical test requirements for stems and shafts have been added;
(c) the requirements for minimum bore sizes for standard round-port full-bore pattern valves have been modified; and
(d) the requirements concerning defects in pressure-containing parts have been revised.

This Standard was prepared by the Subcommittee on Materials, under the jurisdiction of the Technical Committee on Petroleum and Natural Gas Industry Pipeline Systems and Materials and the Strategic Steering Committee on Petroleum and Natural Gas Industry Systems, and has been formally approved by the Technical Committee.

September 2009

Notes:

(1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*

(2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*

(3) *This publication was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this publication.*

(4) *CSA Standards are subject to periodic review, and suggestions for their improvement will be referred to the appropriate committee.*

(5) *All enquiries regarding this Standard, including requests for interpretation, should be addressed to Canadian Standards Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.*

Requests for interpretation should

(a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;
(b) provide an explanation of circumstances surrounding the actual field condition; and
(c) be phrased where possible to permit a specific "yes" or "no" answer.

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are published in CSA's periodical* Info Update*, which is available on the CSA Web site at www.csa.ca.*

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Steel valves

1 Scope

1.1 General

This Standard covers steel valves primarily intended for use in oil or gas pipeline systems. The following types of valves are covered:

(a) gate valves;
(b) plug valves;
(c) ball valves; and
(d) check valves.

1.2 Size, nominal pressure class, and category

1.2.1 Size

This Standard covers valves in sizes from NPS 2 to NPS 60. (See Table A.1.)

1.2.2 Nominal pressure class

This Standard covers valves having cold working-pressure ratings designated by nominal pressure classes from PN 20 to PN 420. The standard nominal pressure classes are shown in Table 1. (ASME class designations are shown in Table B.1.)

1.2.3 Category

This Standard covers valves in the following categories:

(a) Category I: valves without requirements for proven notch-toughness properties; and
(b) Category II: valves with requirements for proven notch-toughness properties.

1.3 End configuration

This Standard covers standard end requirements for flanged, buttwelding, and wafer-type valves. Other end configurations are considered non-standard and are subject to agreement between the purchaser and the manufacturer.

1.4 Terminology

In CSA Standards, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; "should" is used to express a recommendation or that which is advised but not required; "may" is used to express an option or that which is permissible within the limits of the standard; and "can" is used to express possibility or capability. Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material. Notes to tables and figures are considered part of the table or figure and may be written as requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.