Specification for Pipeline Valves

ANSI/API SPECIFICATION 6D
TWENTY-THIRD EDITION, APRIL 2008

EFFECTIVE DATE: OCTOBER 1, 2008

ERRATA 1, JUNE 2008
ERRATA 2, NOVEMBER 2008
ERRATA 3, FEBRUARY 2009
ERRATA 4, APRIL 2010
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ERRATA 6, AUGUST 2011
ADDENDUM 1, OCTOBER 2009
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ADDENDUM 3, OCTOBER 2012

CONTAINS API MONOGRAM ANNEX AS PART OF
U.S. NATIONAL ADOPTION

ISO 14313:2007 (Identical), Petroleum and natural gas industries—Pipeline transportation systems—Pipeline valves

AMERICAN PETROLEUM INSTITUTE

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Upstream Segment

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Suggested revisions are invited and should be submitted to the Standards and Publications Department, API, 1220 L Street, NW, Washington, DC 20005, standards@api.org.

Shall: As used in a standard, “shall” denotes a minimum requirement in order to conform to the specification.

Should: As used in a standard, “should” denotes a recommendation or that which is advised but not required in order to conform to the specification.

This standard is under the jurisdiction of the API Standards Subcommittee on Valves and Wellhead Equipment (API SC6). This API standard is identical with the English version of ISO 14313:2007. ISO 14313 was prepared by Technical Committee ISO/TC 67 Materials, equipment and offshore structures for petroleum and natural gas industries, SC 2, Pipeline transportation systems.

For the purposes of this standard, the following editorial change has been made:

— A national informative annex (Annex F—API Monogram) has been included giving guidance to users.

This standard shall become effective on the date printed on the cover but may be used voluntarily from the date of distribution.

Contents

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14313 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 2, *Pipeline transportation systems*.

This second edition cancels and replaces the first edition (ISO 14313:1999), which has been technically revised, principally by the following.

— Clause 2, on the requirements for conformity to this International Standard, has been added for clarification.

— Clause 7, on the requirements for allowable stresses and allowable deflection on design, has been revised and clarified.

— Clause 8, on material, has been revised to align the requirements with global industry practice for carbon content and carbon equivalent for pressure-containing, pressure-controlling, welding ends and parts requiring welding.

— New requirements on repairs and NDE of welding repairs have been added to Clause 9 on Welding.

— A new table (Table D.2) has been added to Annex D (informative) to provide more guidance for those requirements listed in the text as requiring agreement between the manufacturer/purchaser.

Introduction

This International Standard is the result of harmonizing the requirements of ISO 14313:1999 and API Spec 6D-2002[5].

The revision of ISO 14313 is developed based on input from both ISO/TC67/SC2 WG2 and API 6D TG technical experts. The technical revisions have been made In order to accommodate the needs of industry and to move this International Standard to a higher level of service to the petroleum and natural gas industry.

Users of this International Standard should be aware that further or differing requirements can be needed for individual applications. This International Standard is not intended to inhibit a manufacturer from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This may be particularly applicable where there is innovative or developing technology. Where an alternative is offered, the manufacturer should identify any variations from this International Standard and provide details.

Petroleum and natural gas industries — Pipeline transportation systems — Pipeline valves

1 Scope

This International Standard specifies requirements and provides recommendations for the design, manufacturing, testing and documentation of ball, check, gate and plug valves for application in pipeline systems meeting the requirements of ISO 13623 for the petroleum and natural gas industries.

This International Standard is not applicable to subsea pipeline valves, as they are covered by a separate International Standard (ISO 14723).

This International Standard is not applicable to valves for pressure ratings exceeding PN 420 (Class 2 500).

2 Conformance

2.1 Units of measurement

In this International Standard, data are expressed in both SI units and USC units. For a specific order item, unless otherwise stated, only one system of units shall be used, without combining data expressed in the other system.

For data expressed in SI units, a comma is used as the decimal separator and a space is used as the thousands separator. For data expressed in USC units, a dot (on the line) is used as the decimal separator and a comma is used as the thousands separator.

2.2 Rounding

Except as otherwise required by this International Standard, to determine conformance with the specified requirements, observed or calculated values shall be rounded to the nearest unit in the last right-hand place of figures used in expressing the limiting value, in accordance with the rounding method of ISO 31-0:1992, Annex B, Rule A.

2.3 Compliance to standard

A quality system should be applied to assist compliance with the requirements of this International Standard.

NOTE ISO/TS 29001 gives sector-specific guidance on quality management systems.

The manufacturer shall be responsible for complying with all of the applicable requirements of this International Standard. It shall be permissible for the purchaser to make any investigation necessary in order to be assured of compliance by the manufacturer and to reject any material that does not comply.