Standard for Actuators and Mounting Kits for Valves

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Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue, Suite 1100, Washington, DC 20001, standards@api.org.

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Introduction

It is necessary that users of this document be aware that further or differing requirements can be needed for individual applications. This document is not intended to inhibit a vendor from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This can be particularly applicable where there is innovative or developing technology. Where an alternative is offered, it is the responsibility of the vendor to identify any variations from this document and provide details.

Units of measurement

In this specification, data are expressed in both U.S. customary (USC) and metric (SI) units. For a specific order item, unless otherwise stated, only one system of units shall be used, without

Rounding

Except as otherwise required by this specification, to determine conformance with the specified requirements, observed or calculated values are 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 ASTM E29 or ISO 80000-1, Annex B, Rule A.

Conformance with this International Standard

A quality system applied to assist compliance with the requirements of this International Standard is typically implemented by the manufacturer. The manufacturer is responsible for conforming with all the applicable requirements of this standard. It is permissible for the purchaser to make any investigation necessary to be assured of conformance

Standard for Actuators and Mounting Kits for Valves

1 Scope

This standard defines the requirements for design, mechanical integrity, and sizing of actuators and related components, and is applicable to all types of electric, pneumatic, and hydraulic actuators, inclusive of mounting kit, installed on valves that conform to API Specification 6D.

This standard is not applicable to actuators installed on control valves, valves being used for regulation, valves in subsea service, handheld powered devices, manually operated gearboxes, instrument tubing and associated fittings, and actuator control equipment.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API Specification 6D,[1] *Specification for Valves*

ASME Boiler and Pressure Vessel Code,[2] Section VIII, Division 1, *Rules for Construction of Pressure Vessels*

ASME Boiler and Pressure Vessel Code, Section VIII, Division 2, Alternative Rules, *Rules for Construction of Pressure Vessels*

ASME Boiler and Pressure Vessel Code, Section IX, *Welding and Brazing Qualifications*

ASNT SNT-TC-1A, *Non-Destructive Testing*

ASTM A370,[3] *Standard Test Methods and Definitions for Mechanical Testing of Steel Products*

ASTM B733, *Standard Specification for Autocatalytic (Electroless) Nickel-Phosphorus Coatings on Metal*

ASTM E29, *Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications*

AWS D1.1/D1.1M,[4] *Structural Welding Code — Steel*

AWS QC1, *Standard for AWS Certification of Welding Inspectors*

EN 10204,[5] *Metallic products — Types of inspection documents*

ISO 148-1,[6] *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

ISO 4406:1999, *Hydraulic fluid power — Method for coding the level of contamination by solid particles*

ISO 5210, *Industrial valves — Multi-turn valve actuator attachments*

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1 American Petroleum Institute, 200 Massachusetts Ave, NW, Washington, DC 20001, USA.
2 American Society of Mechanical Engineers International, 345 East 47th Street, New York, NY 10017-2392, USA.
3 American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohoken, PA 19428-2959, USA.
4 American Welding Society, 8669 NW 36 Street, #130, Miami, Florida 33166-6672, www.aws.org.
5 CEN, European Committee for Standardization, Central Secretariat, Rue de Stassart 36, B-1050 Brussels, Belgium.
6 International Organization for Standardization, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Geneva, Switzerland,www.iso.org.