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Industrial valves - Design validation-testing of valves (ISO 23632:2021)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/22

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 23632

October 2022

ICS 23.060.01

English Version

Industrial valves - Design validation-testing of valves (ISO 23632:2021)

Robinetterie industrielle - Essais de validation de la conception des appareils de robinetterie (ISO 23632:2021)

Industriearmaturen - Validierungsprüfung der Konstruktion von Armaturen (ISO 23632:2021)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

The text of ISO 23632:2021 has been prepared by Technical Committee ISO/TC 153 "Valves" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 23632:2022 by Technical Committee CEN/TC 69 "Industrial valves" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

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Endorsement notice

The text of ISO 23632:2021 has been approved by CEN as EN ISO 23632:2022 without any modification.

INTERNATIONAL STANDARD

ISO 23632

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Industrial valves — Design validation-testing of valves

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 153, *Valves*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The scope of this document is currently limited to ball and butterfly valves.

The objective of this document is to outline the requirements and methods for evaluating the performance of metallic industrial valves with respect to seat performance and operating torque capability. Fugitive emission performance was omitted, as it is covered by ISO 15848-1. The number of cycles (205) is consistent with the number in C01 of ISO 15848-1:2015. It serves to test the accuracy and dependability of the measurements and capabilities of a valve as published by the manufacturer in the valve's technical documentation.

Type validation is the most reliable method to validate a range of valve products, covering many aspects, such as its design, material selection and manufacturing processes. It will also serve as a guide for valve selection, allowing customers to compare different valve types, designs and brands.

Several major customers already require type tests, each having their own requirements and specifications. Introducing a defined International Standard will reduce manufacturer's costs by decreasing the number of qualifications, as well as decreasing end-user total cost-of-ownership, by eliminating the possibility of unintentional design flaws.

This validation will improve performance and safety in the plants by enabling any customer to specify durable type-tested industrial valves.

INTERNATIONAL STANDARD **ISO 23632:2021(E)**

Industrial valves — Design validation-testing of valves

1 Scope

This document specifies requirements and acceptance criteria for type testing, in compliance with design conditions, of metallic butterfly and ball valves used for isolating services for all industrial applications, and serves to validate the product design over 205 cycles.

This document excludes testing for safety devices, control valves, thermoplastics valves, and valves for water supply for human consumption and sewage (e.g. the EN 1074 series).

This document defines the procedure for extending the qualification of the tested valve to untested sizes and pressure designations of the same product range.

The purpose of this type test is to validate the seat performance within manufacturer given pressure/temperature rating, provided by the manufacturer's technical documentation of the product. This type test verifies torque requirements and the maximum allowable stem torque (MAST), as given in the manufacturer's technical documentation. This type test validates the durability of seat performance and operating torque through mechanical and thermal cycles.

2 Normative references

The following documents are referred to in the text in such a way that some or all their content constitutes requirements 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.

ISO 5208, *Industrial valves — Pressure testing of metallic valves*

ISO 15848-1, *Industrial valves — Measurement, test and qualification procedures for fugitive emissions — Part 1: Classification system and qualification procedures for type testing of valves*

