SLOVENSKI STANDARD
SIST EN 12266-1:2012

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Nadomešča:
SIST EN 12266-1:2003

Industrijski ventili - Preskušanje kovinskih ventilov - 1. del: Tlačni preskusi, postopki preskušanja in prevzemni pogoji - Obvezujoče zahteve

Industrial valves - Testing of metallic valves - Part 1: Pressure tests, test procedures and acceptance criteria - Mandatory requirements

Industriearmaturen - Prüfung von Armaturen aus Metall - Teil 1: Druckprüfungen, Prüfverfahren und Annahmekriterien - Verbindliche Anforderungen

Robinetterie industrielle - Essais des appareils de robinetterie métalliques - Partie 1: Essais sous pression, modes opératoires d'essai et critères d'acceptation - Prescriptions obligatoires

Ta slovenski standard je istoveten z: **EN 12266-1:2012**

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23.060.01	Ventili na splošno	Valves in general

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EUROPEAN STANDARD

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English Version

Industrial valves - Testing of metallic valves - Part 1: Pressure tests, test procedures and acceptance criteria - Mandatory requirements

Robinetterie industrielle - Essais des appareils de robinetterie métalliques - Partie 1: Essais sous pression, procédures d'essai et critères d'acceptation - Prescriptions obligatoires

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This European Standard was approved by CEN on 25 February 2012.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Foreword

This document (EN 12266-1:2012) has been prepared 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of an identical text or by endorsement, at the latest by October 2012, and conflicting national standards shall be withdrawn at the latest by October 2012.

This document supersedes EN 12266-1:2003.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 97/23/EC (PED).

For relationship with EU Directive 97/23/EC (PED), see informative Annex ZA, which is an integral part of this document.

The main changes compared to the previous edition are:

a) the scope was specified and editorially revised;

b) the normative references were updated;

c) Clause 3 Terms and definitions was revised;

d) Clause 4 Test requirements was changed;

e) A.1.6 Allowable pressure at room temperature was deleted;

f) Table A.2, "Minimum test duration for shell tests" has been updated;

g) Annex ZA was revised;

h) Bibliography was updated.

EN 12266, *Industrial valves — Testing of metallic valves* consists of the following parts:

— *Part 1: Pressure tests, test procedures and acceptance criteria — Mandatory requirements*

— *Part 2: Tests, test procedures and acceptance criteria — Supplementary requirements*

EN 12266-1 was drawn up on the basis of International Standard ISO 5208:1993. EN 12266-2 contains supplementary testing requirements for tests, test procedures and acceptance criteria of valves.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The purpose of this European Standard is to establish certain basic requirements for production pressure testing of industrial valves in order to ensure uniform tests and test procedures. Tests and procedures given in this European Standard may also be used, if required, for type tests and acceptance tests.

Special requirements, which are specific to one product or one performance standard only, are not included in this European Standard. Details should be included in the appropriate standard.

1 Scope

This European Standard specifies requirements for tests, test procedures and acceptance criteria for production testing of industrial valves made of metallic materials.

The specified tests may also be used as type tests or acceptance tests.

Safety devices are not covered by EN 12266-1.

When specified as a normative reference in a valve product or performance standard, this European Standard is to be considered in conjunction with given specific requirements of the valve product or performance standard. Where requirements in a product or performance standard differ from those given in this European Standard, the requirements of the product or performance standard apply.

NOTE For testing of industrial valves of thermoplastic materials, ISO 9393-1 and ISO 9393-2 apply.

2 Normative references

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

EN 736-1:1995, *Valves — Terminology — Part 1: Definition of types of valves*

EN 736-2:1997, *Valves — Terminology — Part 2: Definition of components of valves*

EN 736-3:2008, *Valves — Terminology — Part 3: Definition of terms*

EN 1349, *Industrial process control valves*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 736-1:1995, EN 736-2:1997, EN 736-3:2008 and the following apply.

3.1
shell test
test at a pressure in excess of the **cold working pressure** (3.7) rating of a valve for the purpose of validating the soundness and strength of the valve pressure containing and retaining structures

Note 1 to entry: These structures include valve-actuating mechanisms that have a direct connection to the valve internals subject to fluid test pressure within the valve proper.

3.2
test pressure
internal pressure (gauge), expressed in bar [1)] to which the valve under testing is subjected

Note 1 to entry: Unless otherwise noted, gauge pressure is used throughout this European Standard.

3.3
test fluid
pressurized liquid or gas used to test a valve

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[1] 1 bar = 10^5 Pa.

3.4
test fluid temperature
temperature of the test fluid, ≥ 5 °C and ≤ 40 °C

3.5
DN, NPS
alphanumeric designation of size that is common for components used in a piping system, used for reference purposes, comprising the letters “DN or NPS” followed or preceded by a dimensionless number indirectly related to the physical size of the bore or outside diameter of the end connections

Note 1 to entry: The number following “DN or NPS” does not represent a measurable value and should not be used for calculation purposes except where specified in a product standard.

3.6
PN or Class
alphanumeric designation for pressure-temperature rating that is common for components used in a piping system, used for reference purposes, comprising the letters “PN or Class” followed by a dimensionless number indirectly related to the pressure retaining capability as a function of temperature of the component

3.7
cold working pressure
CWP
maximum fluid pressure assigned to a valve for operation at a fluid temperature of – 20 °C to 38 °C

Note 1 to entry: Valve pressure-temperature ratings are specified in product standards by reference to PN or Class designations.

3.8
double block-and-bleed valve
valve with two separate closure seating surfaces that, when in the closed position, block the flow from both ends when the cavity between the two seating surfaces is vented through a bleed connection between the body cavity and the outside environment

4 Test requirements

Test procedures and acceptance criteria shall be as given in Table 1 and Annex A.

a) Shell strength test P10 is mandatory for every valve except when a statistical sampling is permitted.

b) Shell tightness test P11 is mandatory for every valve except when a statistical sampling is accepted.

c) Seat tightness test P12 is mandatory for every isolating and check valve except when a statistical sampling is accepted.

The seat tightness test for control valves shall be in accordance with EN 1349.

Table 1 — Requirements for tests, test procedures and acceptance criteria

Test		Purpose	Test procedure and acceptance criteria
Title	**Test reference**		
Shell strength [a]	P10	To confirm the pressure containing capability of the shell against internal pressure	see EN 12266-1:2012, A.2
Shell tightness [a]	P11	To confirm the leak tightness of the shell including the operating mechanism sealing against internal pressure	see EN 12266-1:2012, A.3
Seat tightness for valves [b]	P12	To confirm the capability of the seat(s) to comply with the specified leakage rate: — at the time of manufacture; — in the direction(s) for which the valve is designed.	see EN 12266-1:2012, A.4
Obturator strength [c]	P20	To check the pressure containing capability of the obturator	see EN 12266-2:2012, A.2

[a] The shell strength and shell tightness tests may be carried out at the same time.

[b] See Table A.3 for the type of valve.

[c] To check the pressure containing capability of the obturator, if valve is used as the single means of insulation between the content of an item of pressure equipment and the downstream equipment not designed to withstand the upstream pressure.

5 Designation

Tests in accordance with this European Standard shall be designated by the following elements:

— title of test and test reference;

— EN 12266-1.

EXAMPLE Shell strength, Test P10 — EN 12266-1