SLOVENSKI STANDARD
SIST EN 12266-1:2003

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Industrijski ventili - Preskuġanje ventilov - 1. del: Tlaļ ni preskusi, postopki preskuġanja in prevzemni pogoji - Obvezujoļ e zahteve

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

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

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

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ICS:

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English version

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This European Standard was approved by CEN on 27 December 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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

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Contents

Foreword

This document (EN 12266-1:2003) 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of an identical text or by endorsement, at the latest by September 2003, and conflicting national standards shall be withdrawn at the latest by September 2003..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(s).

For relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

EN 12266 consists of two parts, which can be used separately under the general title, *Industrial valves — Testing of valves*:

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

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

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

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

Annex A forms a normative part of this part of EN 12266.

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

Introduction

The purpose of this part of EN 12266 is to establish certain basic requirements for the production pressure testing of industrial valves in order to ensure uniform tests and test procedures are adopted. The tests and procedures detailed may also be used, when required, for type tests and acceptance tests.

1 Scope

This standard specifies mandatory requirements for tests, test procedures and acceptance criteria for production testing of industrial valves.

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

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

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

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

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

3 Terms and definitions

For the purposes of this European Standard, EN 736-1, EN 736-2 and EN 736-3 and the following term and definition apply.

3.1
series-produced
design of valve which is repetitively manufactured

4 Test requirements

4.1 Every valve shall be subject to the shell strength test, reference P10, listed in Table 1, except that this test may be carried out on a statistical sampling basis provided :

a) the valve is series-produced and ;

b) the nominal size of the valve is less than or equal to DN 100 (see A.1.7 for nominal sizes which do not have a DN designation) and ;

c) for valves of a nominal size greater than DN 25, the allowable pressure designation shall not exceed the values in Table 2 and ;

d) the body, bonnet or cover materials are not manufactured from cast steel or cast nickel alloy.

4.2 Every valve shall be subject to the shell tightness test, reference P11, listed in Table 1.

4.3 Every isolating and check valve shall be subject to the seat tightness test, reference P12, listed in Table 1.

4.4 Test procedures and acceptance criteria shall be as given in annex A.

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 A.2
Shell tightness [a]	P11	To confirm the leak tightness of the shell including the operating mechanism sealing against internal pressure	see A.3
Seat tightness	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 A.4
[a] The shell strength and shell tightness tests may be carried out at the same time when the test fluid used for the shell tightness test is a liquid.			

Table 2 — Allowable pressure designation

DN	PN
≤ DN 25	All
DN 32, DN 40	≤ PN 25
DN 50	≤ PN 16 or Class 150
DN 65, DN 80, DN 100	≤ PN 10

5 Designation

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

— title of test, test reference ;

— EN 12266-1.

EXAMPLE Shell strength, Test P10 — EN 12266-1

Annex A
(normative)

Test procedures and acceptance criteria

A.1 General requirements

A.1.1 Purpose

These general requirements shall be applied to all the test procedures detailed in this annex.

Safety aspects of valve testing are not covered in this standard. The users of this standard should analyse the hazard resulting from the pressure and take proper safety precautions.

A.1.2 Test equipment

The test equipment shall be of such a design, that it does not subject the valve to externally applied loads which may affect the results of the test.

NOTE The test equipment can apply external loads sufficient to react to the forces resulting from the test pressure.

When using test equipment and procedures different to that detailed in this standard, the manufacturer shall be able to demonstrate the equivalence of such test procedures and acceptance criteria with the requirements of this standard.

A.1.3 Measuring equipment

The measuring equipment shall be capable of measuring the fluid pressure with an accuracy of ± 5 % of the required test pressure.

A.1.4 Painted, coated or lined valves

Valves shall not be externally painted or otherwise coated with materials capable of sealing against leakage from external surfaces of the shell before the shell strength test, reference P10, and the shell tightness test, reference P11.

Valves with liners, internal linings or internal coatings that form a design feature of the valve may be tested with the liner or after lining or coating.

NOTE If tests in the presence of a representative of the purchaser are specified, painted or coated valves from stock may be retested without removal of painting or coating.

A.1.5 Test fluid

The test fluid to be used, as specified in the relevant test procedures detailed in A.2.2.1, A.3.2.1 and A.4.2.1, shall be :

— either a liquid (water which may contain a corrosion inhibitor, or any other suitable liquid having a viscosity not greater than water) ;

— or a gas (air or other suitable gas).

The test fluid temperature shall be between 5 °C and 40 °C.