TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

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CEN/TS 13547

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English Version

Industrial valves - Copper alloy ball valves

Robinetterie industrielle - Robinets à tournant sphérique en alliage de cuivre

Industriearmaturen - Kugelhähne aus Kupferlegierungen

This Technical Specification (CEN/TS) was approved by CEN on 17 July 2006 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (CEN/TS 13547:2006) has been prepared by Technical Committee CEN/TC 69 “Industrial valves”, the secretariat of which is held by AFNOR.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN Technical Specification: Austria, Belgium, 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 and the United Kingdom.

1 Scope

This document applies to copper alloy ball valves for general use having, flanged, threaded, capillary or compression or loose nut/union body ends.

This document does not apply to copper alloy ball valves for drinking water applications.

This document specifies the design and performance requirements including materials, pressure/temperature ratings for the shell and body seats, dimensions, test procedures and marking.

For some specific fields of application, for example gas, valves to this document can be used provided the requirements of the relevant performance standards are met. Approval by the relevant regulatory body may be required.

The range of nominal sizes is DN 6 to DN 300 and of nominal diameters 6 mm to 110 mm

The range of pressure designations covered is PN 6 ; PN 10 ; PN 16 ; PN 20 ; PN 25 ; PN 32 ; PN 40 ; PN 63 ; Class 150 and Class 300.

For the applicability of each nominal size/diameter and each pressure designation to the different types of valve end, see 4.1.

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.

EN 19:2002, *Industrial valves — Marking of metallic valves*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

EN 558-1, *Industrial valves — Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems — Part 1: PN-designated valves*

EN 558-2, *Industrial valves — Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems — Part 1: Class-designated valves*

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 736-3:1999, *Valves — Terminology — Part 3: Definition of terms*

EN 1092-3, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 3: Copper alloy flanges*

EN 1254-1, *Copper and copper alloys — Plumbing fittings — Part 1: Fittings with ends for capillary soldering or capillary brazing to copper tubes*

EN 1254-2, *Copper and copper alloys — Plumbing fittings — Part 2: Fittings with compression ends for use with copper tubes*

EN 1254-3, *Copper and copper alloys — Plumbing fittings — Part 3: Fittings with compression ends for use with plastics pipes*

EN 1254-4:1998, *Copper and copper alloys — Plumbing fittings — Part 4: Fittings combining other end connections with capillary or compression ends*

EN 1254-5, *Copper and copper alloys — Plumbing fittings — Part 5: Fittings with short ends for capillary brazing to copper tubes*

EN 1759-3, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 3: Copper alloy flanges*

EN 1982, *Copper and copper alloys — Ingots and castings*

EN ISO 5211, *Industrial valves — Part-turn actuator attachments (ISO 5211:2001)*

EN ISO 6509, *Corrosion of metals and alloys — Determination of dezincification resistance of brass (ISO 6509:1981)*

EN 12163, *Copper and copper alloys — Rod for general purposes*

EN 12164, *Copper and copper alloys — Rod for free machining purposes*

EN 12167, *Copper and copper alloys — Profiles and rectangular bar for general purposes*

EN 12168, *Copper and copper alloys — Hollow rod for free machining purposes*

EN 12266-1, *Industrial valves — Testing of valves — Part 1: Pressure tests, test procedures and acceptance criteria — Mandatory requirements*

EN 12420, *Copper and copper alloys — Forgings*

EN 12516-3, *Valves — Shell design strength — Part 3: Experimental method*

EN 12570, *Industrial valves — Method for sizing the operating element*

ISO 7-1, *Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation*

ASME B1.20.1, *Pipe threads, general purpose (inch)*

3 Terms and definitions

For the purposes of this Technical Specification, the definitions of types of valves and components and the definitions of terms given in EN 736-1:1995, EN 736-2:1997 and EN 736-3:1999 apply, together with the following.

3.1
loose nut end
body end provided with tailpiece which retains a loose internally threaded nut or ring for connection to the mating component

3.2
union end
body end provided with an external thread to which is attached a threaded nut or ring, which retains a tailpiece for connection to the mating component

3.3
NPS
alphanumeric designation of size for components of a pipework system, which is used for reference purposes, and which comprises the letters NPS followed by a dimensionless number indirectly related to the physical size of the bore or outside diameter of the end connections

NOTE The number following the letters NPS does not represent a measurable value and should not be used for calculation purposes except where specified in the relevant standard.