SLOVENSKI STANDARD
SIST EN 12627:2000

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Industrijski ventili - Zunanji varilni nastavki za jeklene ventile

Industrial valves - Butt welding ends for steel valves

Industriearmaturen - Anschweißenden für Armaturen aus Stahl

Appareils de robinetterie - Extrémités a souder en bout pour appareils de robinetterie en acier

Ta slovenski standard je istoveten z: **EN 12627:1999**

ICS:

23.060.01 Ventili na splošno Valves in general

SIST EN 12627:2000 **en**

EUROPEAN STANDARD
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English version

Industrial valves - Butt welding ends for steel valves

Appareils de robinetterie - Extrémités à souder en bout pour appareils de robinetterie en acier

Industriearmaturen - Anschweißenden für Armaturen aus Stahl

This European Standard was approved by CEN on 16 April 1999.

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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 Central Secretariat has the same status as the official versions.

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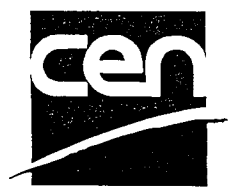

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This European Standard 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of an identical text or by endorsement, at the latest by November 1999, and conflicting national standards shall be withdrawn at the latest by November 1999.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association. This European Standard is considered to be a supporting standard to those application and product standards which in themselves support an essential safety requirement of a New Approach Directive and which make reference to this European Standard.

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies the dimensions of butt welding ends of steel valves DN 8 to DN 1400 designed to be butt welded to standardised pipes.

NOTE: For the outside diameters and wall thickness of standardised pipes in accordance with ISO 4200.

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 test 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.

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

ISO 4200: Plain end steel tubes, welded and seamless - General tables of dimensions and masses per unit length.

3 Definitions

For the purposes of this standard the definitions of EN 736-1, EN 736-2 and prEN 736-3 apply.

4 Symbols

The symbols used in this standard are as follows:

∅A is the outside diameter of the valve butt welding end (see table 1);

∅B is the inside diameter of the pipe;

T is the wall thickness of the pipe;

t_D is the thickness of the valve butt welding end.

5 Requirements

5.1 Butt welding ends of steel valve bodies shall have the form and dimensions as shown in figures 1, 2, 3, 4 or 5 unless the contract states that the weld to the pipe is to be ultrasonically tested.

5.2 Where the weld to the pipe is to be ultrasonically tested, butt welding ends of steel valve bodies shall have the form and dimensions as shown in figures 4 and 5 except that for globe valves of "Z" form the 10° maximum angle can be increased to 20° maximum.

5.3 For pipe wall thickness,T, greater than 4 mm and less than or equal to 22 mm, figures 2 or 4 shall be used. For valves having a wall thickness, t_D, of less than or equal to 4 mm, the butt welding ends can be cut square as shown in figure 1.

5.4 For pipe wall thickness of more than 22 mm figures 3 or 5 shall be used.

5.5 The inside and outside surfaces of the butt welding end shall be machined all over. The internal profile of the body is at the option of the manufacturer unless otherwise specified by the purchaser.

5.6 The outside diameter of ∅A of the butt welding end shall have the dimensions and tolerances as shown in table 1 when the allowable stress of the valve butt welding end material is greater than or equal to that of the pipe material.

Table 1 : Dimensions and tolerance of outside diameter, ∅A, of butt welding ends

Valve DN (nominal size)	DN 8	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
∅A in mm	14	18	22	28	35	44	50	62	77	91	117	144	172	223
Tolerance in mm	+2,5 -1			+2,5 -1,5		+2,5 -2			+2,5 -2,5			+4 -2,5		

Valve DN (nominal size)	DN 250	DN 300	DN 350	DN 400	DN 450	DN 500	DN 600	DN 700	DN 750	DN 800	DN 900	DN 1000	DN 1200	DN 1400
∅A in mm	278	329	362	413	464	516	619	721	772	825	927	1029	1235	1440
Tolerance in mm	+4 -2,5													

5.7 When the allowable stress of the valve butt welding end material is less than that of the pipe material the thickness of the valve butt welding end shall be increased to compensate as shown in figure 6. The thickness of the valve butt welding end shall be determined according to the equation:

$$t_D = T \times \frac{\text{Allowable stress of pipe material}}{\text{Allowable stress of valve butt welding end material}}$$

but limited to $t_D \leq 1{,}5 \times T$

5.8 The inside diameter of the butt welding end shall be equal to the inside diameter of the pipe to which it is to be welded to within the tolerance stated in table 2.

Table 2: Tolerance of inside diameter of butt welding ends

Valve DN (nominal size)	DN 8 to DN 250	DN 300 to DN 450	DN 500 to DN 1400
Tolerance in mm	+1 -1	+2 -2	+3 -2

Figure 1: Square butt welding end connection to pipe of wall thickness T≤ 4mm

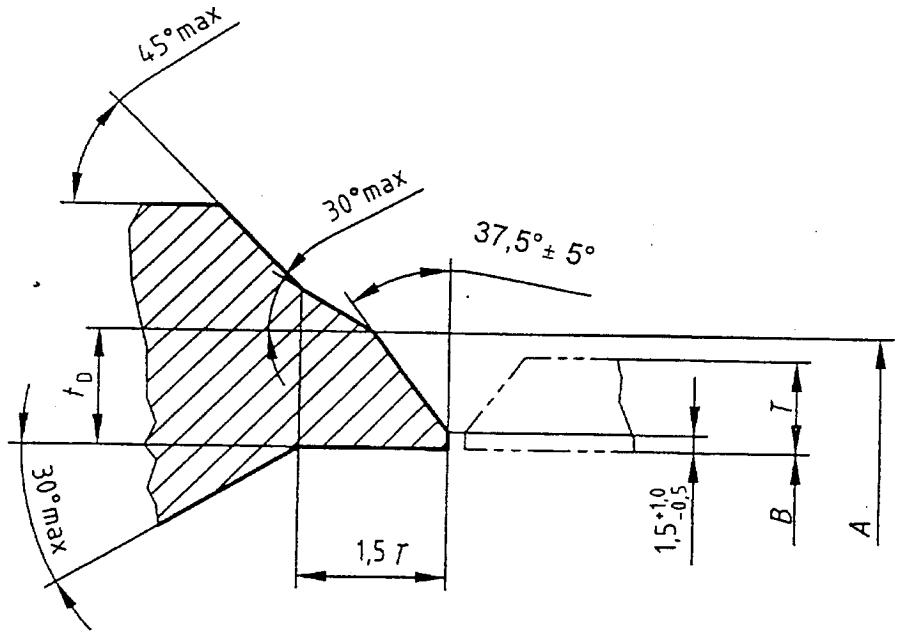

Figure 2 : Single-V butt weld end connection to pipe of wall thickness 4 mm< T ≤ 22 mm

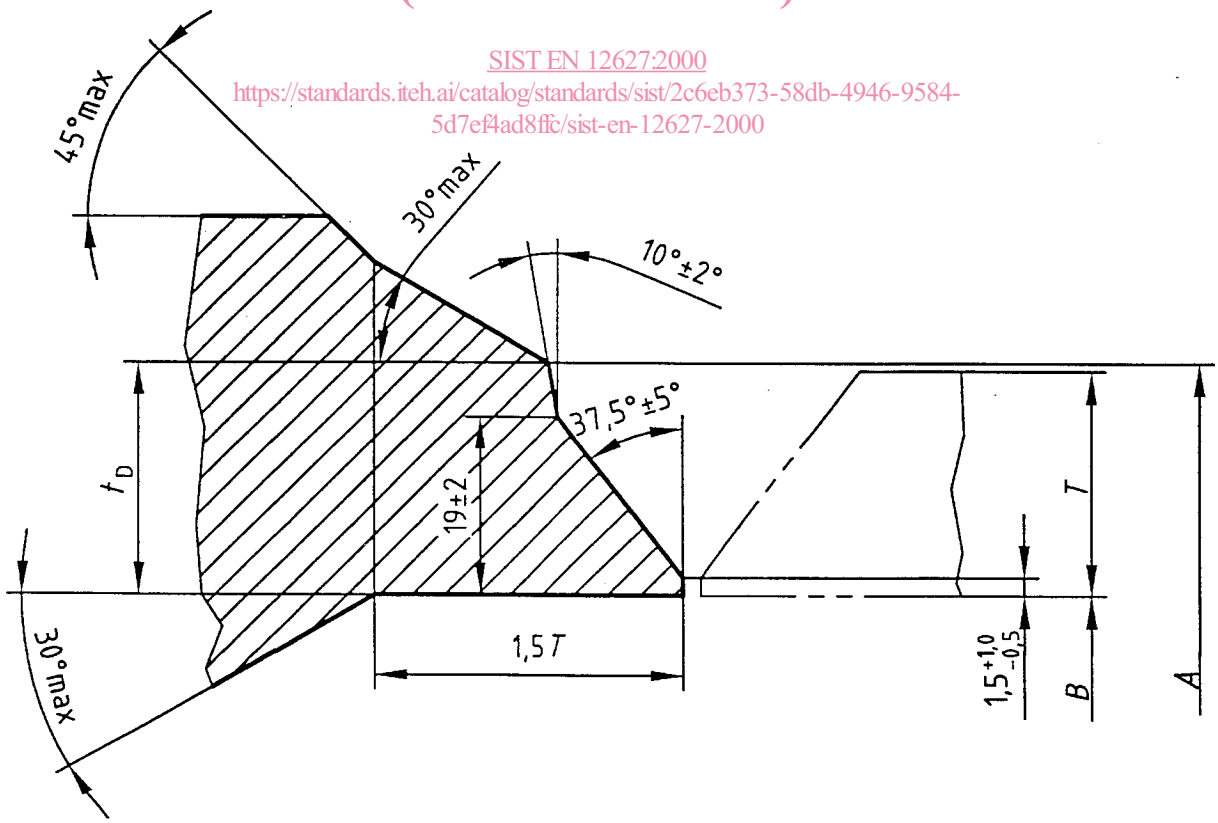

Figure 3 : Single-V butt weld end connection with V root to pipe of wall thickness T> 22 mm