SLOVENSKI STANDARD
SIST EN 1443:1999

01-december-1999

Dimniki – Splošne zahteve

Chimneys - General requirements

Abgasanlagen - Allgemeine Anforderungen

Conduits de fumée - Exigences générales

Ta slovenski standard je istoveten z: **EN 1443:1999**

ICS:

91.060.40 Dimniki, jaški, kanali Chimneys, shafts, ducts

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EUROPEAN STANDARD
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English version

Chimneys - General requirements

Conduits de fumée - Exigences générales

Abgasanlagen - Allgemeine Anforderungen

This European Standard was approved by CEN on 26 March 1999.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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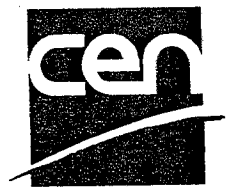

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 166 "Chimneys", the secretariat of which is held by UNL

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of an identical text or by endorsement, at the latest by October 1999, and conflicting national standards shall be withdrawn at the latest by October 1999.

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.

A list of standards and draft standards produced by CEN/TC 166 is given in Annex B "Bibliography".

Introduction

At its first meeting in March 1989 CEN/TC 166 "Chimneys" decided to start the development of material orientated European product standards with a so-called "interface standard" of general requirements. It was the purpose to create material-independent requirements, designations and comparable assessments for chimneys.

The development of heating appliances which has progressed in the recent years due to the need of saving energy and protecting the environment was paralleled by technical development of chimneys. Therefore, new additional requirements for chimneys are necessary, e. g. operation with overpressure, operation at the formation of condensate.

Chimneys consist of different components which can be assembled, e. g. either

- as system chimneys, that is installed using a combination of compatible chimney components, obtained or specified from one manufacturing source with product responsibility for the whole chimney, or

- as custom-built chimneys, that is installed or built on-site in accordance with the execution standard, using a combination of compatible chimney components that may be from one or more sources.

This European Standard covers both cases. Annex A lists the relevant performance requirements for system chimneys and custom-built chimneys.

This European Standard specifies a designation scheme for chimneys which considers combinations between heating appliance and chimney. This scheme takes into account for example different climatic conditions and different fuels.

The ability of a chimney to prevent fire spread within a building from area to area should be defined. At present, no European Standard concerning the test of fire spread does exist; therefore, this ability could not be covered in this standard. Fire rating classes were not included in the classification of chimneys in the absence of European standardized test. National regulations concerning fire resistance should be taken into account for the time being.

1 Scope

This European standard specifies general requirements and the basic performance criteria and specifies limit values where appropriate for chimneys (including connecting flue pipes and their fittings) used to convey the products of combustion from heating appliances to the outside atmosphere. It is intended to be used as a reference for product standards for components used in the construction of chimneys. It also identifies minimum requirements for marking and evaluation of conformity.

It does not apply to structurally independent chimneys.

NOTE This European standard can be used as a basis for the specifications of products covered by a European Technical Approval.

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.

EN 563, *Safety of machinery – Temperatures of touchable surfaces – Ergonomics data to establish temperature limit values for hot surfaces*

prEN 1859, *Chimneys - Metal chimneys - Test methods*

prEN 13216-1, *Chimneys - Test methods for system chimneys - Part 1 : General test methods*

3 Definitions

For the purposes of this European Standard the following definitions apply.

3.1
heating appliance

Unit generating products of combustion which need to be conveyed to the outside atmosphere.

3.2
flue

Passage for conveying the products of combustion to the outside atmosphere.

3.3
flue gas

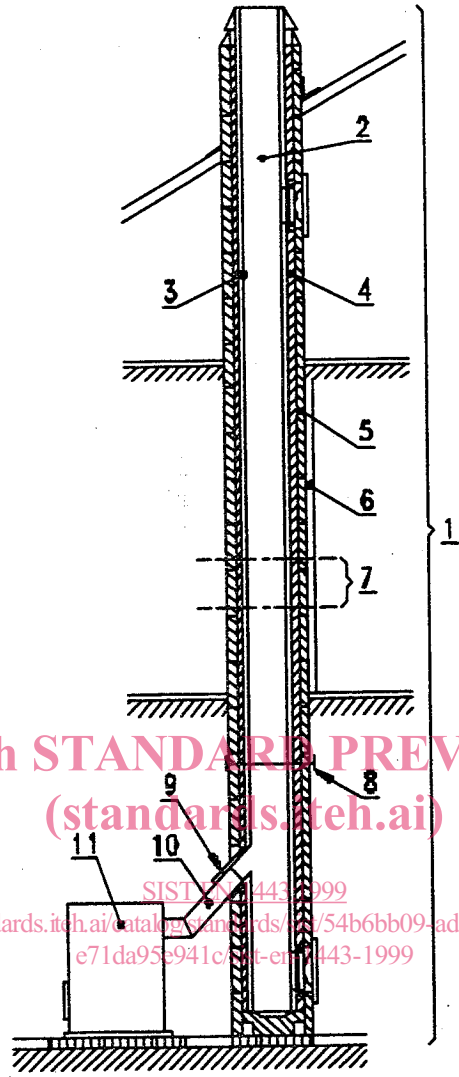
Gaseous portion of the products of combustion conveyed in a flue.

3.4
products of combustion

Products resulting from the combustion of fuel (gaseous, liquid and solid constituents).

3.5
flue liner

Wall of a chimney consisting of components the surface of which is in contact with products of combustion.



Legend

1 chimney
2 flue
3 flue liner
4 thermal insulation
5 outer wall
6 enclosure or cladding
7 chimney section
8 multi-wall chimney
9 chimney fitting
10 connecting flue pipe
11 heating appliance

Figure 1 — Chimney components and chimney accessories

3.6
chimney

Structure consisting of a wall or walls enclosing a flue or flues.

3.7
chimney component

Any part of a chimney.

3.8
chimney section

Straight chimney component conveying products of combustion.

3.9
chimney fitting

Chimney component conveying products of combustion except a chimney section.

3.10
chimney accessory

Chimney component not conveying products of combustion.

3.11
single-wall chimney

Chimney where the flue liner is the chimney.

3.12
multi-wall chimney

Chimney consisting of a flue liner and at least one additional wall.

3.13
system chimney

Chimney that is installed using a combination of compatible chimney components, obtained or specified from one manufacturing source with product responsibility for the whole chimney.

3.14
custom-built chimney

Chimney that is installed or built on-site using a combination of compatible chimney components that may be from one or different sources.

3.15
outer wall

External wall of a chimney the surface of which comes in contact with ambient or external environment, or is within cladding or enclosure.

3.16
enclosure

Barrier that when built around a chimney will give additional safety in case of fire and may provide additional heat transfer resistance.

3.17
cladding

Additional non-structural outer wall around a chimney for protection against heat transfer or weathering, or for decorative purposes.

3.18
flue block

Factory-made single- or multi-wall chimney component with one or more flues.

3.19
terminal

Fitting installed at the outlet of a chimney.

3.20
relining

Process of restoring or replacing the flue liner of a chimney.

3.21
negative pressure chimney

Chimney designed to operate with the pressure inside the flue less than the pressure outside the flue.

3.22
positive pressure chimney

Chimney designed to operate with the pressure inside the flue greater than the pressure outside the flue.

3.23
dry operating condition

Condition when a chimney is designed to operate normally with the temperature of the inner surface of the flue liner above the water dew point.

3.24
wet operating condition

Condition when the chimney is designed to operate normally with the temperature of the inner surface of the flue liner at or below the water dew point.

3.25
sootfire

Combustion of the flammable residue deposited on the flue liner.

3.26
sootfire resistant chimney

Chimney that is capable of withstanding a specified thermal shock.

3.27
condensate

Liquid products formed when the flue gas is at or below the water dew point.

3.28
thermal resistance of a chimney

Resistance to heat transfer through the wall or walls of the chimney.

3.29
joint

Connection between two components.

3.30
fire resistance

Duration in minutes of the resistance to spread of fire to adjacent areas in a standard fire resistance test.