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Thermal insulating products for building equipment and industrial installations — Determination of dimensions, squareness and linearity of preformed pipe insulation

Produits isolants thermiques pour les équipements de bâtiments et les installations industrielles — Détermination des dimensions, de l'équerrage et de la linéarité des coquilles isolantes préformées

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 1, *Test and measurement methods*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 88, *Thermal insulating materials and products*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 12628:2011), which has been technically revised.

The main changes are as follows:

— EN 13467:2018 and ISO 12628:2011 have been merged into one document;

— Clause 2, Normative references, has been added and the numbering of the following clauses has been changed accordingly;

— the terms 3.6, thickness uniformity, and 3.9, circular segment cord, have been added;

— new Figure 2 has been added and the numbering of the following figures has been changed accordingly;

— subclause 5.5 has been added and the numbering of the following clauses has been changed accordingly;

— technical revision, mainly of Clause 6, Test specimens, Clause 7, Procedure, and Clause 8, Calculation and expression of results;

— editorial revisions.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Thermal insulating products for building equipment and industrial installations — Determination of dimensions, squareness and linearity of preformed pipe insulation

1 Scope

This document specifies the equipment and procedures for determining the dimensions, squareness and linearity of preformed pipe insulation, supplied in one piece, half sections or segments. It is applicable to thermal insulating products.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
circumference
C
circular length of the outer surface of the pipe insulation

Note 1 to entry: See Figure 1.

3.2
outside diameter
D_o
linear distance between two opposite points on the outside surface of the pipe insulation measured across the centre

Note 1 to entry: See Figure 1.

3.3
inside diameter
D_i
linear distance between two opposite points on the inside surface of the pipe insulation measured across the centre

Note 1 to entry: See Figure 1.

3.4
length
l
linear dimension measured perpendicularly to the *circumference* (3.1) of the pipe insulation

Note 1 to entry: See Figure 1.

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3.5
thickness
d
thickness of the insulation product measured perpendicularly between the outside and the inside surface of the pipe insulation

Note 1 to entry: See Figure 1.

3.6
thickness uniformity
Δd
variation measured on thickness, *d* (3.5), expressed as the difference between the two extremes of the measurements of thickness *d*

3.7
deviation from squareness
v
maximum distance between a product, at its end, from a line which just touches the product and which is perpendicular to its major axis

Note 1 to entry: See Figure 5.

3.8
deviation from linearity
L
maximum distance between a plane reference surface on which the test specimen rests and the outside surface of the pipe insulation

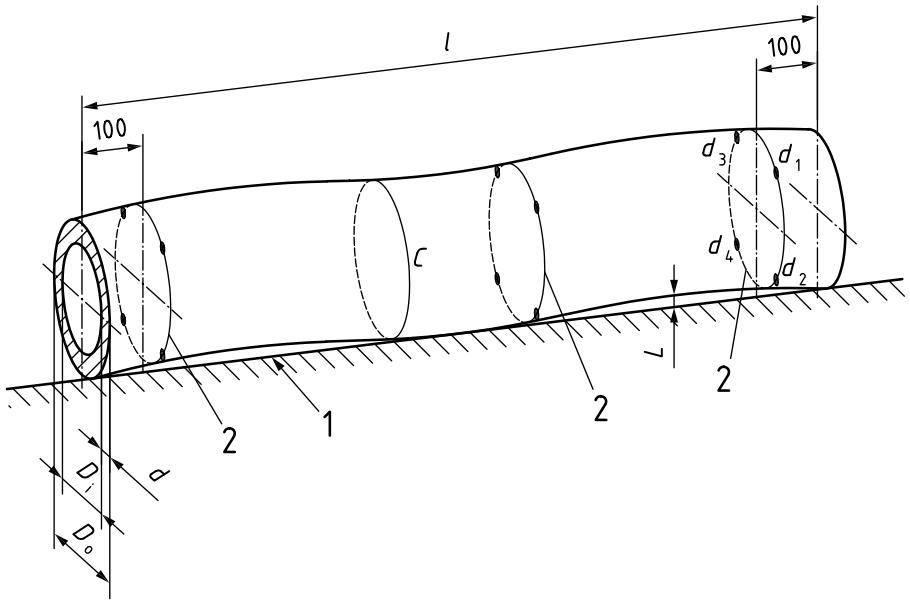
Note 1 to entry: See Figure 1.

3.9
circular segment chord
ch
length (3.4) of the straight line joining the two end points of the curved surface of an insulation segment

Note 1 to entry: For an insulation product, two chords are defined; inner chord, ch_i, for the inner surface and outer chord, ch_o, for the outer surface (see Figure 2).

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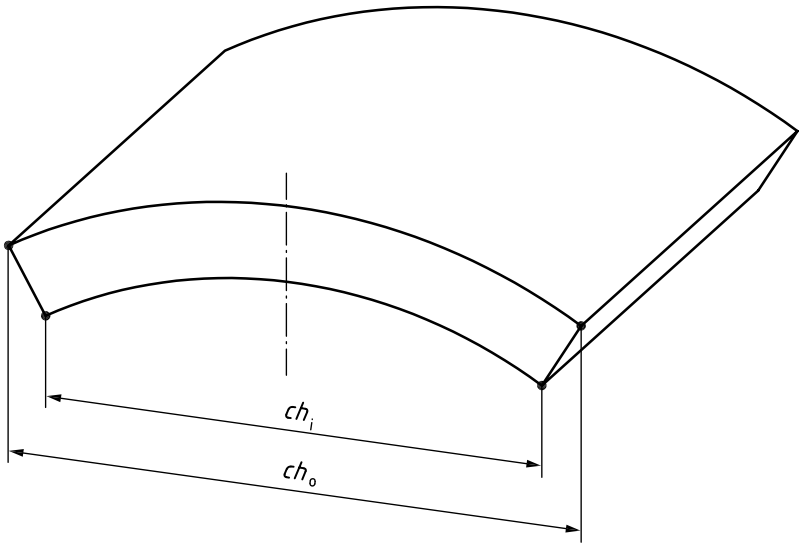
Dimensions in millimetres



Key

1	flat surface	L	deviation from linearity
2	locations for measurements (see 7.2.2.4)	D_i	inside diameter
C	circumference	l	length
D_o	outside diameter	d	thickness
d_1, d_2, d_3, d_4	thickness readings at right angles to each other		

Figure 1 — Illustration of the definitions



Key

ch_i inner chord

ch_o outer chord

Figure 2 — Illustration of the chords of a circular segment

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