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Conveyor belts with a textile carcass — Total belt thickness of constitutive elements — Test methods

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 188, *Conveyor belts* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 583:2007), which has been technically revised.

The main changes are as follows:

- a requirement was added regarding the expression of results (see 4.5).

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.

Conveyor belts with a textile carcass — Total belt thickness of constitutive elements — Test methods

1 Scope

This document specifies test methods for the determination of total belt thickness and the thickness of constitutive elements of conveyor belts having a textile carcass. The constitutive elements include the covers, the carcass and interlayers, i.e. the material between adjoining plies.

This document does not apply to light conveyor belts as described in ISO 21183-1^[1].

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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>
<https://standards.iteh.ai/catalog/standards/sist/3b008261-6c93-4996-9b0c->
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Determination of total belt thickness

4.1 Apparatus

The apparatus shall consist of a flat, rigid baseplate, on which the test piece rests, and a gauge having a flat circular foot, 10 mm in diameter, by means of which a specified pressure is applied to the test piece.

The gauge shall be capable of measuring to at least 0,1 mm.

The pressure applied shall be (22 ± 5) kPa for materials with a hardness equal to or greater than 35 IRHD; otherwise, the pressure shall be (10 ± 2) kPa.

NOTE The masses needed to give these specified pressures using a 10 mm diameter foot are 176 g and 80 g, respectively.

4.2 Test piece

Either test piece 1 or test piece 2, according to the following, shall be used.

Test piece 1: cut a rectangular piece of full-width belt, designated as dimension L , with a length of 50 mm, as shown in Figure 1.

Dimensions in millimetres

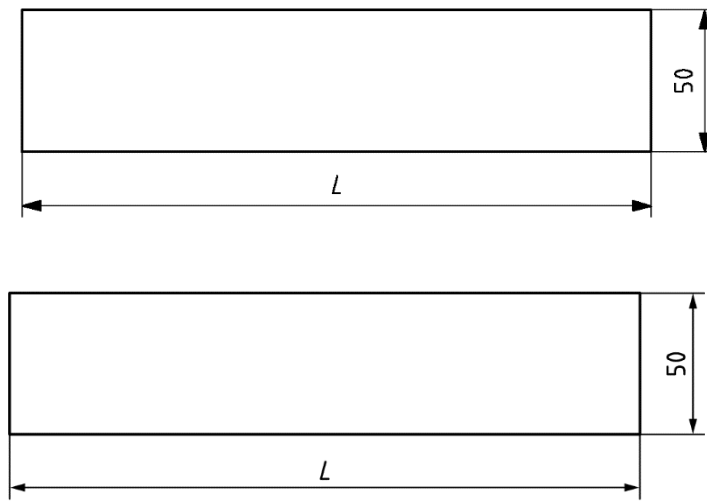


Figure 1 — Test piece 1 (rectangular)

Test piece 2: cut a wedge-shaped piece of full-width belt, designated as dimension L , as shown in Figure 2.

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Dimensions in millimetres

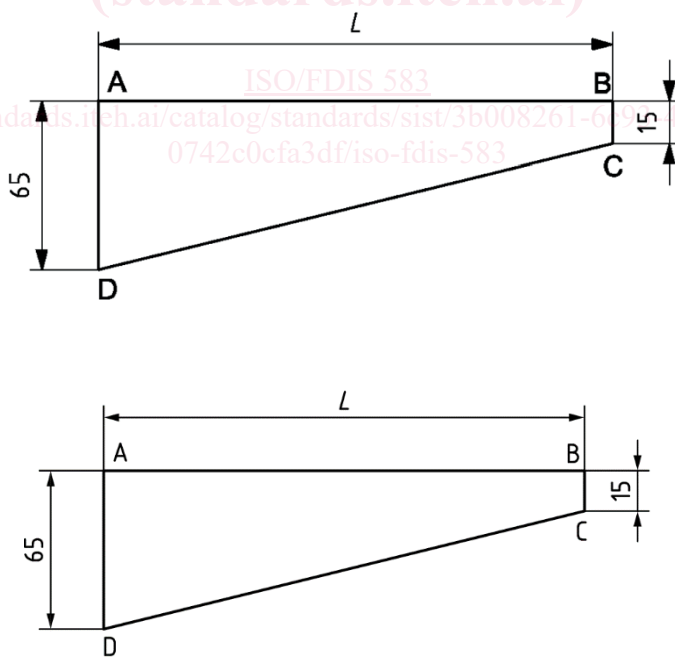
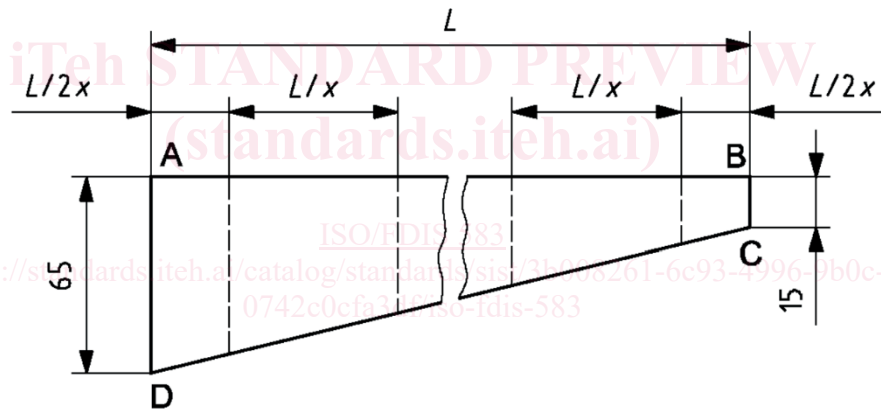
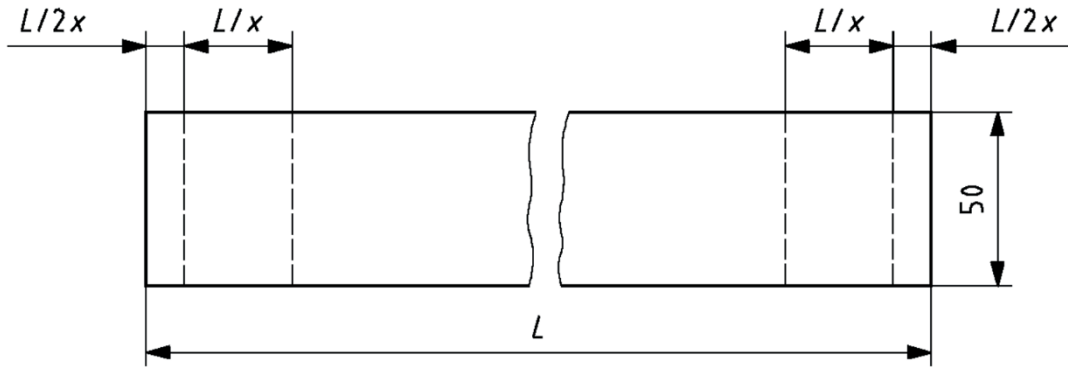


Figure 2 — Test piece 2 (wedge-shaped)

4.3 Measurement points

The measurement points shall be spaced equidistantly along the long axis of the test piece (i.e. the belt width), as shown in Figure 3.

Dimensions in millimetres



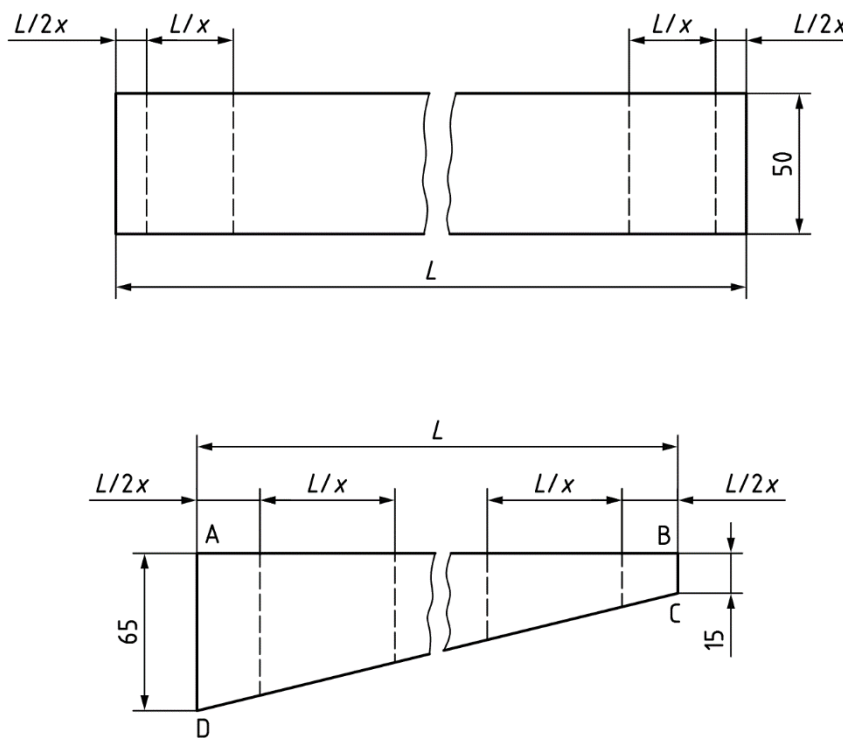


Figure 3 — Measurement points

Determine the minimum number of measurement points, x , according to the width of the belt, L , in accordance with Table 1.

Table 1 — Minimum number of measurement points

Belt width L mm	Minimum number of measurement points x
$L \leq 650$	3
$650 < L \leq 1\,200$	5
$L > 1\,200$	8

4.4 Procedure

Measure the total thickness, d , of the test piece at each of the measurement points specified in 4.3, using the pressure specified in 4.1.

4.5 Expression of results

Calculate the arithmetic mean and the difference between the maximum thickness and the minimum thickness of the individual measurements taken according to 4.4.

Express the arithmetic mean as the total belt thickness in millimetres, to the nearest 0,1 mm.