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Conveyor belts — Marking

Courroies transporteuses — Marquage

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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 on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by ISO/TC 41, *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*.

This third edition cancels and replaces the second edition (ISO 433:1991, and ISO 433:1991/Amd. 1:2006), which has been technically revised.

The main changes compared to the previous edition are as follows:

— the Normative references have been updated;

— a Bibliography has been added.

Conveyor belts — Marking

1 Scope

This document specifies the marking of conveyor belts, i.e.

— the indications to be marked;

— the dimensions of the marks;

— the position of the marks.

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 283, *Textile conveyor belts — Full thickness tensile strength, elongation at break and elongation at the reference load — Test method*

ISO 284, *Conveyor belts — Electrical conductivity — Specification and test method*

ISO 340, *Conveyor belts — Laboratory scale flammability characteristics — Requirements and test method*

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO 4195, *Conveyor belts with heat-resistant rubber covers — Heat resistance of covers — Requirements and test methods*

ISO 10247, *Conveyor belts — Characteristics of covers — Classification*

3 Terms and definitions

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

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

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

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

3.1
width belting
conveyor belting originally made to the width at which it is intended to be installed

3.2
slab belting
conveyor belting made in a wide slab for slitting into the width at which it will be installed

4 Indications to be marked

The indications to be marked are shown in a) to e) in the order in which they appear in the marking.

a) The standard value of the breaking strength at full thickness; in the longitudinal direction, expressed in newtons per millimetre determined in accordance with ISO 283.

b) One or more letters identifying the properties, in accordance with Table 1.

Table 1 — Properties

Letter	Property	Corresponding ISO Standard
F	Flame resistance with and without covers	ISO 340
J	Flame resistance with covers	ISO 340
E	Electrical conductivity (static electricity)	ISO 284
S	Flame resistance with and without covers and electrical conductivity (static electricity)	ISO 340 ISO 284
K	Flame resistance with covers and electrical conductivity (static electricity)	ISO 340 ISO 284
H	Severe cut and gouge service	ISO 10247
D	Severe abrasion service	ISO 10247
L	Moderate service	ISO 10247

c) The last two figures of the year of manufacture.

d) A letter (or letters) identifying the manufacturer in his own country. Below these letters, and without requirements as to dimensions, the manufacturer's country in accordance with ISO 3166-1, ISO alpha-2 code.

e) These indications may be supplemented by not more than five characters, intended to complete the identification of the belt [for example, heat resistance (see ISO 4195), serial number of the belt length]. If provision is made for applying a national standard, a certification or a special certification, its number may be written below or alongside the other marks, without requirements as to dimensions. Other characters may be added.

5 Dimensions and position of marks

5.1 Dimensions of marks

— Height: 20 mm to 80 mm;

— Depth of impression: 1,5 mm maximum (for belts of cover thickness greater than or equal to 2 mm); 50 % maximum of the cover thickness (for belts of cover thickness less than 2 mm).

5.2 Position of marks

Unless otherwise specified, the marks shall be made on the top cover of the conveyor belt.

In the case of specific instructions, the marking may be made on the bottom cover of the conveyor belt for a particular clearly defined use.

5.2.1 Marking of full-width belts

The marks shall be approximately 50 mm to 100 mm from the left-hand edge and/or 50 mm to 100 mm from the right-hand edge of the belt, with reference to the part of the mark nearest the edge. The distance between marks should be agreed between the manufacturer and the customer, but marks shall be a maximum of 25 m apart.

These requirements are shown in Figure 1.

5.2.2 Marking of slab belts

In the case of slab belts, the marks shall be made in the transverse direction on the belt width, with a maximum spacing of 15 m.

The marks shall be of such a size that they are repeated several times across the width of the belt so that full marks appear on narrower belts cut from slabs.

Note In order to avoid moulded irregularities in the load-carrying part of the belts, transverse marks can be vulcanized either on rubber label strips or on the pulley side cover.

These requirements are shown in Figure 2.

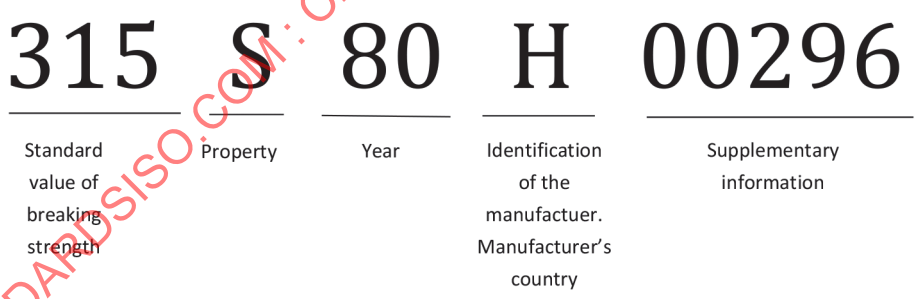
5.2.3 Marking on side plates of roll

This optional marking shall be applied on the side plates of the roll using paint.

5.2.4 Marking on mandrel

This optional marking shall be applied on the mandrel using paint.

6 Example of marking



Dimensions in millimetres

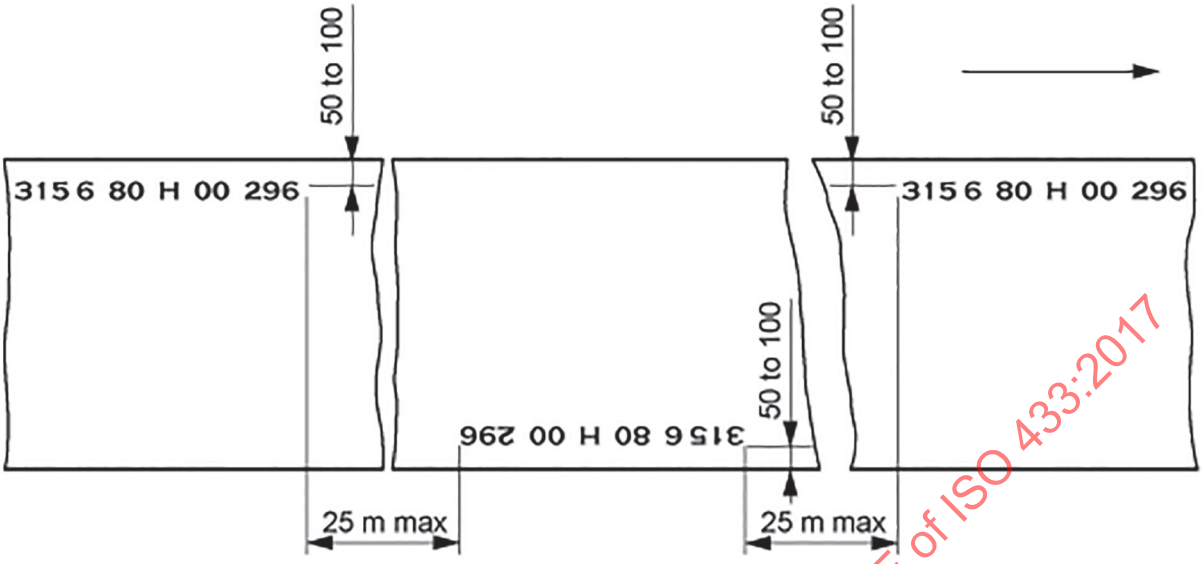


Figure 1 — Marking of full-width belts

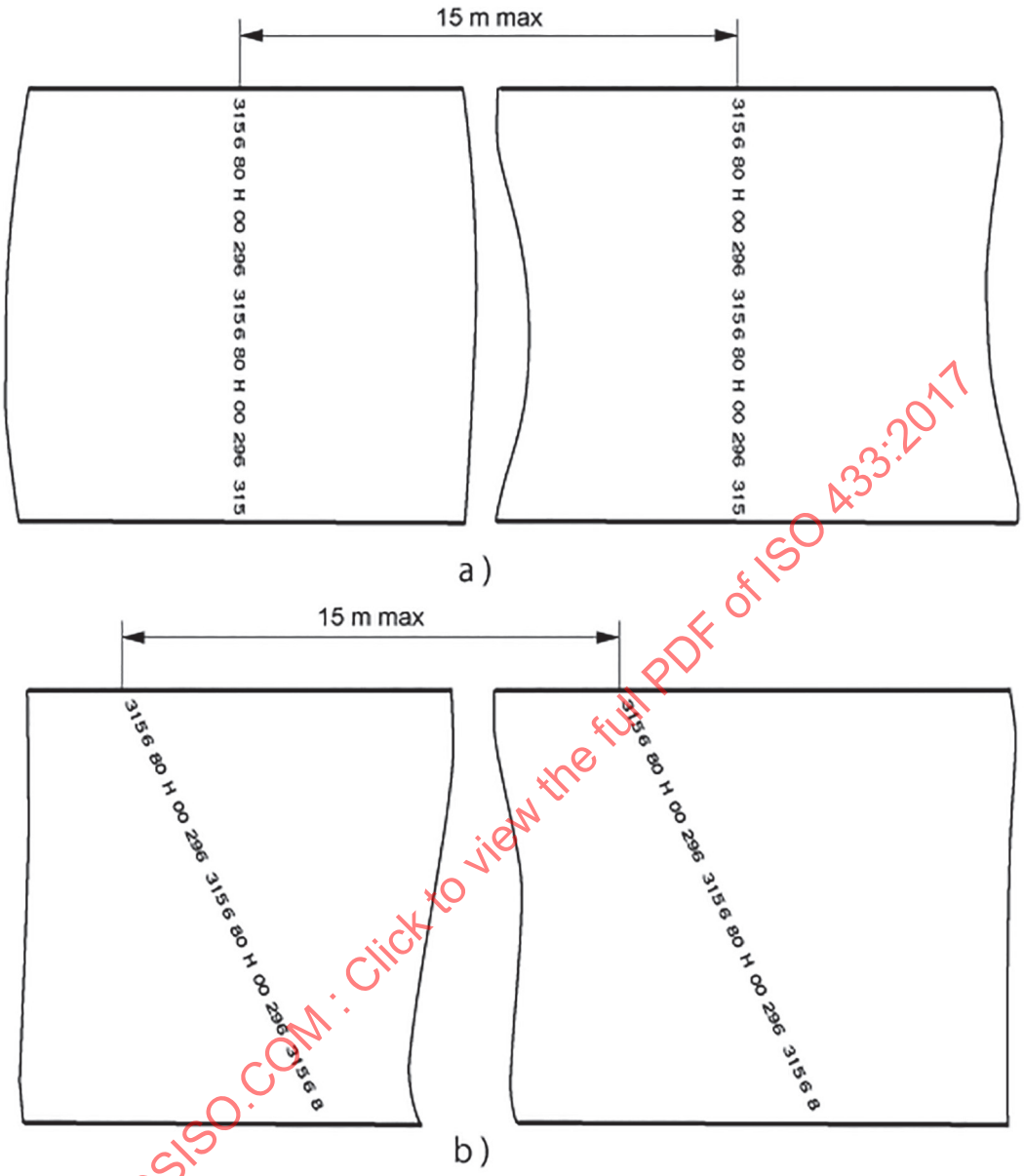


Figure 2 — Marking of slab belts