BS EN ISO 15236-3:2017

BSI Standards Publication

Steel cord conveyor belts

Part 3: Special safety requirements for belts for use in underground installations

Documents
Document Sharing Hub

Full document details: BS EN ISO 15236-3:2017

National foreword

This British Standard is the UK implementation of EN ISO 15236-3:2017. It is identical to ISO 15236-3:2017. It supersedes BS EN ISO 15236-3:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/67, Conveyor belts.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2017
Published by BSI Standards Limited 2017

ISBN 978 0 580 94913 5

ICS 53.040.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 June 2017.

Amendments/corrigenda issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS EN ISO 15236-3:2017

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 15236-3

April 2017

ICS 53.040.20

Supersedes EN ISO 15236-3:2007

English Version

Steel cord conveyor belts - Part 3: Special safety requirements for belts for use in underground installations (ISO 15236-3:2017)

Courroies transporteuses à câbles d'acier - Partie 3: Exigences de sécurité particulières aux courroies utilisées dans des installations souterraines (ISO 15236-3:2017)

Stahlseil-Fördergurte - Teil 3: Besondere Sicherheitsanforderungen für den Einsatz untertage (ISO 15236-3:2017)

This European Standard was approved by CEN on 29 March 2017.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2017 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 15236-3:2017 E

Documents
Document Sharing Hub

Full document details: BS EN ISO 15236-3:2017

European foreword

This document (EN ISO 15236-3:2017) has been prepared by Technical Committee ISO/TC 41 “Pulleys and belts (including veebelts)” in collaboration with Technical Committee CEN/TC 188 “Conveyor belts” the secretariat of which is held by SNV.

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 2017, and conflicting national standards shall be withdrawn at the latest by October 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 15236-3:2007.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 15236-3:2017 has been approved by CEN as EN ISO 15236-3:2017 without any modification.

Documents
Document Sharing Hub
Full document details: BS EN ISO 15236-3:2017

Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Symbols and units ... **2**

5 Belt design ... **3**
- 5.1 Standard type ... 3
- 5.2 Conveyor belting having transverse reinforcements ... 3
- 5.3 Belt core ... 3

6 Design and construction ... **4**
- 6.1 Belt strengths ... 4
- 6.2 Belt width ... 5
- 6.3 Belt edge and supporting belt width ... 5
  - 6.3.1 Edge width ... 5
  - 6.3.2 Supporting belt width ... 5
- 6.4 Number of cords ... 5
- 6.5 Cord pitch ... 5
- 6.6 Thickness of covers ... 6
- 6.7 Belt thickness ... 6
- 6.8 Belt length ... 6

7 Mechanical requirements ... **6**
- 7.1 Breaking strength of the steel cord ... 6
- 7.2 Position of the steel cord in the conveyor belt ... 7
  - 7.2.1 General ... 7
  - 7.2.2 Horizontal position ... 7
  - 7.2.3 Vertical position ... 7
- 7.3 Number and spacing of cord joints ... 7
- 7.4 Cord pull-out force ... 7
- 7.5 Covers — Quality classification ... 8
- 7.6 Adhesion ... 8
- 7.7 Transverse reinforcements ... 8
  - 7.7.1 Breaker ... 8
  - 7.7.2 Weft ... 9
- 7.8 Troughability ... 9
- 7.9 Tracking ... 10
- 7.10 Safety requirements ... 10

8 Sampling ... **10**

9 Designation ... **10**

10 Ordering data ... **11**

11 Marking ... **11**

Annex A (informative) **Helpful information to be supplied by the purchaser** ... **12**

Bibliography ... **14**

© ISO 2017 – All rights reserved

Documents
Document Sharing Hub

Full document details: BS EN ISO 15236-3:2017

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 Technical Committee ISO/TC 41 *Pulleys and belts (including veebelts)*, Subcommittee SC 3, *Conveyor belts*.

This second edition cancels and replaces the first edition (ISO 15236-3:2007), of which it constitutes a minor revision with the following changes:

— the references have been updated;

— Table 3 has been expanded to include belt widths from 1 800 to 3 200.

A list of all parts in the ISO 15236 series can be found on the ISO website.

© ISO 2017 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS EN ISO 15236-3:2017

Steel cord conveyor belts —

Part 3: Special safety requirements for belts for use in underground installations

1 Scope

This document specifies the performance and constructional requirements applicable to conveyor belts for underground mining having steel cords in the longitudinal direction as reinforcement. The requirements for design and construction apply to the design of single belts, as well as the design of complete type series such as those covered in ISO 15236-2.

Steel cord belts in accordance with this document are intended for use underground in coal mines and in other applications where the highest demands for safety against fire and explosion hazards have to be complied with.

NOTE At present, the requirements can only be met by the use of compounds based on chloroprene rubber for the covers, as well as for the bonding rubber.

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 indicated applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 703, *Conveyor belts — Transverse flexibility (troughability) — Test method*

ISO 2062, *Textiles — Yarns from packages — Determination of single-end breaking force and elongation at break*

ISO 4649, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

ISO 7590, *Steel cord conveyor belts — Methods for the determination of total thickness and cover thickness*

ISO 7622-2, *Steel cord conveyor belts — Longitudinal traction test — Part 2: Measurement of tensile strength*

ISO 7623, *Steel cord conveyor belts — Cord-to-coating bond test — Initial test and after thermal treatment*

ISO 8094, *Steel cord conveyor belts — Adhesion strength test of the cover to the core layer*

EN 13827, *Steel cord conveyor belts — Determination of the lateral and vertical displacement of steel cords*

EN 14973, *Conveyor belts for use in underground installations — Electrical and flammability safety requirements*

3 Terms and definitions

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

© ISO 2017 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 15236-3:2017