SLOVENSKI STANDARD
SIST EN ISO 683-17:2015

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Toplotno obdelana jekla, legirana in avtomatna jekla - 17. del: Jekla za kroglične in valjčne ležaje (ISO 683-17:2014)

Heat-treated steels, alloy steels and free-cutting steels - Part 17: Ball and roller bearing steels (ISO 683-17:2014)

Für eine Wärmebehandlung bestimmte Stähle, legierte Stähle und Automatenstähle - Teil 17: Wälzlagerstähle (ISO 683-17:2014)

Aciers pour traitement thermique, aciers alliés et aciers pour décolletage - Partie 17: Aciers pour roulements (ISO 683-17:2014)

Ta slovenski standard je istoveten z: **EN ISO 683-17:2014**

ICS:

21.100.01	Ležaji na splošno	Bearings in general
77.140.10	Jekla za toplotno obdelavo	Heat-treatable steels
77.140.20	Visokokakovostna jekla	Stainless steels

SIST EN ISO 683-17:2015 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 683-17

October 2014

ICS 77.140.10; 77.140.20

Supersedes EN ISO 683-17:1999

English Version

Heat-treated steels, alloy steels and free-cutting steels - Part 17: Ball and roller bearing steels (ISO 683-17:2014)

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

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

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Foreword

This document (EN ISO 683-17:2014) has been prepared by Technical Committee ISO/TC 17 “Steel” in collaboration with Technical Committee ECISS/TC 105 “Steels for heat treatment, alloy steels, free-cutting steels and stainless steels” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

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.

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Endorsement notice

The text of ISO 683-17:2014 has been approved by CEN as EN ISO 683-17:2014 without any modification.

INTERNATIONAL STANDARD

ISO 683-17

Third edition
2014-10-15

Heat-treated steels, alloy steels and free-cutting steels —

Part 17: Ball and roller bearing steels

Aciers pour traitement thermique, aciers alliés et aciers pour décolletage —
Partie 17: Aciers pour roulements

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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. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 17, *Steel*, Subcommittee SC 4, *Heat treatable and alloy steels*.

This third edition cancels and replaces the second edition (ISO 683-17:1999), which has been technically revised.

ISO 683 consists of the following parts, under the general title *Heat treatable, alloy steels and free-cutting steels*:

— *Part 1: Non-alloy steels for quenching and tempering*

— *Part 2: Alloy steels for quenching and tempering*

— *Part 3: Case-hardening steels*

— *Part 4: Free-cutting steels*

— *Part 5: Nitriding steels*

— *Part 14: Hot-rolled steels for quenched and tempered springs*

— *Part 15: Valve steels for internal combustion engines*

— *Part 17: Ball and roller bearing steels*

— *Part 18: Bright steel products*

Heat-treated steels, alloy steels and free-cutting steels —

Part 17: Ball and roller bearing steels

1 Scope

1.1 This part of ISO 683 specifies the technical delivery requirements for five groups of wrought ball and roller bearing steels as listed in Table 3, namely

— through-hardening bearing steels (steels with about 1 % C and 1 % to 2 % Cr),

— case-hardening bearing steels,

— induction-hardening bearing steels (unalloyed and alloyed),

— stainless bearing steels, and

— high-temperature bearing steels.

1.2 This part of ISO 683 applies to the products and heat-treatment conditions given in Table 1 and the surface conditions given in Table 2.

1.3 In addition to this part of ISO 683, the general technical delivery requirements of ISO 404 are applicable.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 377, *Steel and steel products — Location and preparation of samples and test pieces for mechanical testing*

ISO 404, *Steel and steel products — General technical delivery requirements*

ISO 642, *Steel — Hardenability test by end quenching (Jominy test)*

ISO 643, *Steels — Micrographic determination of the apparent grain size*

ISO 3763, *Wrought steels — Macroscopic methods for assessing the content of non-metallic inclusions*

ISO 3887, *Steels — Determination of depth of decarburization*

ISO 4948-1, *Steels — Classification — Part 1: Classification of steels into unalloyed and alloy steels based on chemical composition*

ISO 4948-2, *Steels — Classification — Part 2: Classification of unalloyed and alloy steels according to main quality classes and main property or application characteristics*

ISO/TS 4949, *Steel names based on letter symbols*

ISO 4967, *Steel — Determination of content of non-metallic inclusions — Micrographic method using standard diagrams*

ISO 4969, *Steel — Macroscopic examination by etching with strong mineral acids*

ISO 5949, *Tool steels and bearing steels — Micrographic method for assessing the distribution of carbides using reference photomicrographs*

ISO 6506-1, *Metallic materials — Brinell hardness test — Part 1: Test method*

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method*

ISO 6929, *Steel products — Vocabulary*

ISO 9443, *Heat-treatable and alloy steels — Surface quality classes for hot-rolled round bars and wire rods — Technical delivery conditions*

ISO/TR 9769, *Steel and iron — Review of available methods of analysis*

ISO 10474, *Steel and steel products — Inspection documents*

ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6929 and the following apply.

3.1
ball and roller bearing steels
steels for rings and/or rolling bodies which use balls and rollers to maintain the separation between the moving parts of the bearing

4 Classification and designation

4.1 Classification

The classification of the relevant steel grades is allocated in accordance with ISO 4948-1 and ISO 4948-2. All steel grades covered by this part of ISO 683 are special steels.

4.2 Designation

For the steel grades covered by this part of ISO 683, the steel names given in the relevant tables are allocated in accordance with ISO/TS 4949.

5 Information to be supplied by the purchaser

5.1 Mandatory information

The manufacturer shall obtain the following information from the purchaser at the time of enquiry and order:

a) the quantity to be delivered;

b) the designation of the products form (billets, bars, rod, wire, tubes, rings, discs, etc.);

c) either the reference to the dimensional standard and the dimensions and tolerances selected from it (see 7.6) or the designation of any other document covering the dimensions and tolerances required for the product;

d) a reference to this part of ISO 683, i.e ISO 683-17;