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Steel for the reinforcement and prestressing of concrete - Test methods - Part 3: Prestressing steel (ISO 15630-3:2019, Corrected version 2019-10)



#### EESTI STANDARDI EESSÕNA

#### NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 15630-3:2019 sisaldab Euroopa standardi EN ISO 15630-3:2019 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 15630-3:2019 consists of the English text of the European standard EN ISO 15630-3:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.03.2019.	Date of Availability of the European standard is 06.03.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <u>standardiosakond@evs.ee</u>.

#### ICS 77.140.15

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## EUROPEAN STANDARD NORME EUROPÉENNE

### **EN ISO 15630-3**

EUROPÄISCHE NORM

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#### **English Version**

## Steel for the reinforcement and prestressing of concrete -Test methods - Part 3: Prestressing steel (ISO 15630-3:2019, Corrected version 2019-10)

Aciers pour l'armature et la précontrainte du béton - Méthodes d'essai - Partie 3: Aciers de précontrainte (ISO 15630-3:2019, Version corrigée 2019-10)

Stähle für die Bewehrung und das Vorspannen von Beton - Prüfverfahren - Teil 3: Spannstähle (ISO 15630-3:2019, korrigierte Fassung 2019-10)

This European Standard was approved by CEN on 26 November 2018.

This European Standard was corrected and reissued by the CEN-CENELEC Management Centre on 30 October 2019.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

#### **European foreword**

This document (EN ISO 15630-3:2019) has been prepared by Technical Committee ISO/TC 17 "Steel" in collaboration with Technical Committee CEN/TC 459/SC 4 "Concrete reinforcing and prestressing 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 September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

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

This document supersedes EN ISO 15630-3:2010.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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 15630-3:2019, Corrected version 2019-10 has been approved by CEN as EN ISO 15630-3:2019 without any modification.

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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 <a href="www.iso.org/directives">www.iso.org/directives</a>).

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 <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

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 <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

This document was prepared by ISO/TC 17, *Steel*, Subcommittee SC 16, *Steels for the reinforcement and prestressing of concrete.* 

This third edition cancels and replaces the second edition (ISO 15630-3:2010), which has been technically revised. Changes have been introduced in the Introduction, <u>Clauses 1</u> and <u>2</u>, <u>5.3.1</u>, <u>5.3.2</u>, 9.3, 9.4.4, 10.4.3, 11.4 (now <u>10.3</u>, <u>10.4.4</u>, <u>11.4.3</u>, <u>12.4</u>) and <u>Figure 8</u>. The Bibliography has been updated and the dated references have been replaced by undated references. A new <u>Clause 8</u> on the wrapping test has been added.

A list of all parts in the ISO 15360 series can be found on the ISO website.

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 <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

This corrected version of ISO 15630-3:2019 incorporates the following corrections:

— in Figure 8,  $60^{\circ} \pm 12^{\circ}$  has been corrected to  $60^{\circ} \pm 12'$ .

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#### Introduction

The aim of ISO 15630 (all parts) is to provide all relevant test methods for reinforcing and prestressing steels in one standard series.

This document covers standard test methods, as well as specialized test methods that are not commonly used in routine testing and that should only be considered where relevant (or specified) in the applicable product standard.

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have been b. Reference is made to International Standards on the testing of metals, in general, as they are applicable. Complementary provisions have been given if needed.

# Steel for the reinforcement and prestressing of concrete — Test methods —

#### Part 3:

## **Prestressing steel**

#### 1 Scope

This document specifies test methods applicable to prestressing steel (bar, wire or strand) for concrete.

This document does not cover the sampling conditions that are dealt with in the product standards.

A list of options for agreement between the parties involved is provided in  $\underline{\text{Annex } A}$ .

#### 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 4957, Tool steels

ISO 4965-1, Metallic materials — Dynamic force calibration for uniaxial fatigue testing — Part 1: Testing systems

ISO 4965-2, Metallic materials — Dynamic force calibration for uniaxial fatigue testing — Part 2: Dynamic calibration device (DCD) instrumentation

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

ISO 6892-1, Metallic materials — Tensile testing — Part 1: Method of test at room temperature

ISO 7500-1, Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system

ISO 7801, Metallic materials — Wire — Reverse bend test

ISO 7802, Metallic materials — Wire — Wrapping test

ISO 9513, Metallic materials — Calibration of extensometer systems used in uniaxial testing

ISO 16020, Steel for the reinforcement and prestressing of concrete — Vocabulary

#### 3 Terms, definitions and symbols

For the purposes of this document, the terms and definitions given in ISO 16020 apply.

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

- ISO Online browsing platform: available at <a href="https://www.iso.org/obp">https://www.iso.org/obp</a>
- IEC Electropedia: available at <a href="http://www.electropedia.org/">http://www.electropedia.org/</a>