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

**Part 1:
Reinforcing bars, wire rod and wire**

*Aciers pour l'armature et la précontrainte du béton — Méthodes
d'essai —*

Partie 1: Barres, fils machine et fils pour béton armé



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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 15630-1 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 16, *Steels for the reinforcement and prestressing of concrete*.

This second edition cancels and replaces the first edition (ISO 15630-1:2002), which has been technically revised.

ISO 15630 consists of the following parts, under the general title *Steel for the reinforcement and prestressing of concrete — Test methods*:

- *Part 1: Reinforcing bars, wire rod and wire*
- *Part 2: Welded fabric*
- *Part 3: Prestressing steel*

Introduction

The aim of ISO 15630 is to provide all relevant test methods for reinforcing and prestressing steels in one standard. In that context, the existing International Standards for testing these products have been revised and updated. Some further test methods have been added.

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

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

Part 1: Reinforcing bars, wire rod and wire

1 Scope

This part of ISO 15630 specifies test methods applicable to reinforcing bars, wire rod and wire for concrete.

2 Normative references

The following referenced documents are indispensable for the application 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 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

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

ISO 9513, *Metallic materials — Calibration of extensometers used in uniaxial testing*

3 Symbols

The symbols used in this part of ISO 15630 are given in Table 1.

Table 1 — Symbols

Symbol	Unit	Description	Reference
a'	mm	Height of longitudinal rib	10.3.2, 11.3
a_m	mm	Rib height at the mid-point or indentation depth in the centre	10.3.1.2, 11.3.2, 11.4.2
$a_{\max}^a$	mm	Maximum height of transverse rib or maximum indentation depth	10.3.1.1
$a_{s,i}$	mm	Average height of a portion i of a rib subdivided into p parts of length Δl , or average depth of a portion i of an indentation subdivided into p parts of width Δb	11.3.1, 11.4.1
$a_{1/4}$	mm	Rib height at the quarter-point or indentation depth at the quarter of their width	10.3.1.2, 11.3.2, 11.4.2
$a_{3/4}$	mm	Rib height at the three-quarters point or indentation depth at the three-quarters of their width	10.3.1.2, 11.3.2, 11.4.2
A	%	Percentage elongation after fracture	5.1, 5.3
A_g	%	Percentage non-proportional elongation at maximum force (F_m)	5.3