

Stainless steels for springs - Part 1: Wire (ISO 6931-1:2016)

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NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 6931-1:2020 sisaldab Euroopa standardi EN ISO 6931-1:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 6931-1:2020 consists of the English text of the European standard EN ISO 6931-1:2020.
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.
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EUROPEAN STANDARD

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English Version

Stainless steels for springs - Part 1: Wire (ISO 6931-1:2016)

Aciers inoxydables pour ressorts - Partie 1: Fils (ISO 6931-1:2016)

Nichtrostende Stähle für Federn - Teil 1: Draht (ISO 6931-1:2016)

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

The text of ISO 6931-1:2016 has been prepared by Technical Committee ISO/TC 17 "Steel" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 6931-1:2020 by Technical Committee CEN/TC 459/SC 6 "Wire rod and wires" the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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 10270-3:2011.

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Endorsement notice

The text of ISO 6931-1:2016 has been approved by CEN as EN ISO 6931-1:2020 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 www.iso.org/directives).

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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 6931-1:1994), which has been technically revised.

ISO 6931 consists of the following parts, under the general title *Stainless steels for springs*:

- *Part 1: Wire*
- *Part 2: Narrow strip*

Stainless steels for springs —

Part 1: Wire

1 Scope

This part of ISO 6931 specifies the grades of stainless steels which are generally used in the cold drawn condition in the form of wire of circular cross-section up to 10,00 mm in diameter, for the production of springs and spring parts exposed to corrosive effects and sometimes to slightly increased temperatures (see [Annex A](#)).

Certain steel grades covered by ISO 16143-2 are also used for springs, although to a much lesser extent. In these cases, the mechanical properties (tensile strength, etc.) will be agreed between purchaser and supplier. Similarly, diameters between 10,00 mm and 15,00 mm can be ordered according to the specifications of this part of ISO 6931, in which case the parties will agree upon the required mechanical characteristics.

In addition to the specifications of this part of ISO 6931, 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 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

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

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

ISO 15510, *Stainless steels — Chemical composition*

ISO 16143-2, *Stainless steels for general purposes — Part 2: Corrosion-resistant semi-finished products, bars, rods and sections*

ISO 22034-1, *Steel wire and wire products — Part 1: General test methods*

ISO 22034-2, *Steel wire and wire products — Part 2: Tolerances on wire dimensions*

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

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