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Stainless steels — Chemical composition

Aciers inoxydables — Composition chimique



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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 15510 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 4, *Heat treatable and alloy steels*.

This first edition cancels and replaces ISO/TS 15510:2003, which has been technically revised.

Stainless steels — Chemical composition

1 Scope

This International Standard lists the chemical compositions of stainless steels agreed by ISO/TC 17/SC 4, mainly on the basis of a composition of the specifications in existing ISO, ASTM, EN, JIS and GB (Chinese) standards. They apply to all wrought product forms, including ingots and semi-finished material.

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 6929:1987, *Steel products — Definitions and classification*

3 Terms and definitions

For the purposes of this document, the terms and definition given in ISO 6929:1987 and the following apply.

3.1

stainless steel

steel with at least 10,5 % (mass fraction) Cr and maximum 1,2 % (mass fraction) C

NOTE For the classification of stainless steels according to their structure, composition and application, see Annex C.

4 Chemical composition

The chemical composition of stainless steels approved by ISO/TC 17/SC 4 is given in Table 1.

WARNING — Due to hazardous effects to health and environmental problems of lead (Pb) it is recommended to use steels with sulfur additions instead. These steels generally have comparable properties relating to machinability.

NOTE If, in special cases, for example, an ISO committee charged with the establishment or revision of a standard for a specific product or application of stainless steels sees the necessity of deviating from the specifications in Table 1, it should inform ISO/TC 17/SC 4 (Secretariat's address: FES/DIN, Postfach 10 51 45, 40042 Dusseldorf, Germany) of the reasons for this and try, before such deviations are considered, to achieve consensus for a corresponding modification to Table 1.

5 Designation of comparable steels

The steel designation according to this International Standard is based on a 10-digit code presented in 4 subgroups of digits: 4 digits-3 digits-2 digits-1 digit.

XXXX-YYY-ZZ-A