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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 1220-2007

Replacing GB/T 1220-1992

Stainless steel bars

不锈钢棒

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1 Scope

This standard specifies the content of the order, the dimensions, shape, weight and tolerances, the technical requirements, the test methods, the inspection rules, and the

packaging, marking and quality certificate for stainless steel bars.

The tables are the standard

The grades, given by designation and by chemical composition, and the mechanical properties required of each in the delivery condition.

For stainless steel those two cannot be separated: the same composition solution annealed and the same composition hardened and tempered are different materials, with different properties and different uses. A grade without a delivery condition specifies nothing.

The families a designer chooses between

The austenitic steels, which are not hardenable by heat treatment and are chosen for corrosion resistance and formability. The martensitic, which are hardenable and are chosen where hardness and strength matter more than corrosion resistance. The ferritic. And the precipitation hardening grades.

Most specification errors in stainless are a choice from the wrong family, not a wrong grade within one.

And what is added to composition and properties

The surface condition and the permitted defects. The dimensional tolerances and straightness. The macrostructure and the non-metallic inclusions. The intergranular corrosion test where it is specified - which is what tells a fabricator whether a grade can be welded without sensitising it. And the ultrasonic examination for the larger sections.

The clause on the content of the order is the practical one: grade, delivery condition, dimensions, surface and any supplementary tests all have to be stated when ordering.

About this edition

GB/T 1220-2007 is the current edition. It was issued on 14 May 2007 and has been in force since 1 December 2007, replacing GB/T 1220-1992.

GB/T 1220-1992 has been superseded: a specification that still cites it is citing a withdrawn edition.

The interval between issue and effect is the transition period. It exists so that producers, laboratories and buyers can requalify products, revise procedures and use up documentation before the new text becomes the one that applies. The date on this page is the official one from the record of the Standardization Administration.

Classification and status

GB/T 1220-2007 is classified under ICS 77.140.20. ICS is the International Classification for Standards, the same scheme used by ISO and by the national bodies of most countries, which is what allows a Chinese standard to be placed beside its foreign counterparts on subject rather than on number.

Its Chinese Standard Classification code is CCS H 40. CCS is the domestic scheme, a letter for the sector and two digits for the subject within it, and it is the code by which the standard is filed and searched in China.

The GB/T prefix marks a recommended national standard. It is not, in itself, law: it becomes binding when a contract names it, when a regulation or a mandatory standard refers to it, or when a producer declares conformity with it. In practice that covers most of the cases in which it will be read - a purchase specification, an inspection agreement or a certification scheme.

How a Chinese national standard is set out

Chinese national standards are drafted to the rules of GB/T 1.1, which fixes the order in which a standard is set out. The document opens with a foreword recording the issuing bodies, the relationship to any previous edition and the technical committee responsible for it. Clause 1 is the scope. Clause 2 lists the normative references - the other standards that have to be applied together with this one, and without which its requirements cannot be met. Clause 3 gives the terms and definitions. The technical clauses follow: the requirements themselves, the test or measurement methods by which conformity is established, the inspection rules that say how a lot is sampled and judged, and, for a product standard, the provisions on marking, packaging, transport and storage. Annexes, normative or informative, come last.

GB/T 1220-2007 runs to 1002 pages in the English translation. What is delivered is the complete document in that order: every clause, every table, every figure and every annex of the Chinese original, with the same numbering, so that a reference to a clause number in a contract or a test report points to the same place in both languages.

About this English translation

The English edition of GB/T 1220-2007 is a full translation of the official Chinese text, not a summary, an abstract or a machine rendering left unchecked. Clause and subclause numbers, table and figure numbers and annex letters are those of the original, because they are what a specification, a purchase order or a test report cites.

Technical terms are translated against the vocabulary standards of the same field, so that a term used in GB/T 1220-2007 reads the same way as in the other Chinese standards it is used beside. Where a term has an established English form in an ISO or IEC document on the same subject, that form is used; where China's term has no foreign counterpart, it is

translated literally and the Chinese is kept alongside it rather than replaced by an approximation.

Quantities, units and symbols are carried over unchanged. Chinese standards use SI, so a value in the translation is the value in the original document, not a conversion, and a limit read from the English text is the limit that will be applied by a Chinese inspection body reading the Chinese one.

This page is compiled from the official publication record: the standard number and both titles, the issuing bodies, the dates of issue and effect, the edition it replaces, the ICS and CCS classification. The requirements, limits, tables and test conditions are in the document itself.