



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

中华人民共和国国家标准

GB/T 699-1999

Quality Carbon Structural Steels

优质碳素结构钢

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Foreword

This standard is a revision on GB/T 699-1988 *Specifications for Quality Carbon Structural Steels*.

The current revision of this standard has made modifications in respect of the following items:

- The name of standard is changed to "*Quality carbon structural steels*";
- The applicable scope is extended to such extent that quality carbon structural steels with diameter or thickness greater than 250mm may be supplied;
- The chapter of "Order Information" is added;
- The size, dimensions and allowance shall be in accordance with the stipulations in standard GB/T 702-1986 or GB/T 908-1987;
- Marking symbols of steel products and unified numerical representation for various designations are added;
- The range of carbon content for designations below 40 (with exception of 08F) is narrowed by 0.01%;
- The phosphorus and sulfur contents and macroscopic structure of steels are classified into three grades based on the metallurgical quality;
- For steels delivered in the hot-rolled or hot forged state, the mechanical properties may be exempted from inspection if the supplier can guarantee the conformance;
- In note 2 of Table 3, the quench cooling medium for designation 75, 80 and 85 steels is changed from "water cooling" to "oil cooling";
- The "fracture" test is cancelled;
- The acceptable grading of non-metallic inclusions is cancelled.

This standard shall replace GB/T 699-1988 *Specifications for Quality Carbon Structural Steels* since its implementation.

This standard is proposed by the State Bureau of Metallurgical Industry.

This standard is under the jurisdiction of the National Technical Committee of Steel Standardization.

This standard is prepared mainly by the Information Standard Institute of the Ministry of Metallurgical Industry, Chongqing Special Steel Co., Shanghai Pugang Group Corporation, Daye Special Steel Co., Ltd. and Handan Iron and Steel Corporation.

Main draftsmen of this standard are: Luan Yan, Tang Yifan, Tang Zhibai, Chen Changxi, Sun Ping, Teng Changling, Zhao Gaunxin

This standard was initially issued in January 1965 and revised for the first time in February 1988.

Quality Carbon Structural Steels

1 Scope

This standard specifies the size, dimensions, weight and allowance, technical requirements, test methods, inspection rules, packaging, marking and quality certificates of hot rolled or forged quality carbon structural steels.

This standard is applicable to quality carbon structural steel bars with diameter or thickness not greater than 250mm. Those with diameter or thickness greater than 250mm may also be supplied as agreed between the buyer and the supplier.

The designations and chemical composition as specified in this standard is also applicable to steel ingots, steel billets and their manufactures.

2 Normative References

Provisions from the following standards shall form part of this standard by being cited herein. At the time of publication of this standard, the revisions of these standards as shown are valid. All standards shall be subject to amendment and revision, and all users of this standard should probe into the possibility of applying the updated revisions of the following standards.

GB/T 222-1984 Method for sampling of specimens for chemical analysis of steels and allowance for chemical composition of finished products

GB/T 224-1987 Method for decarburized layer depth test of steels

GB/T 226-1991 Method for acid attack test of macroscopic structure and imperfection of steels

GB/T 228-1987 Method for tensile test of metals

GB/T 229-1994 Metallic Material - Charpy notch impact test

GB/T 231-1984 Method for Brinell hardness test of metals

GB/T 233-1982 Method for upsetting test of metals

GB/T 702-1986 Size, dimensions, weight and allowance of hot rolled round and square steels

GB/T 908-1987 Size, dimensions, weight and allowance of forged round and square steels

GB/T 1979-1980 Grading diagrams for evaluation of macroscopic structural imperfections of structural steels

GB/T 2101-1989 General stipulations on acceptance, packaging, markings and quality certificates of profile steels

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