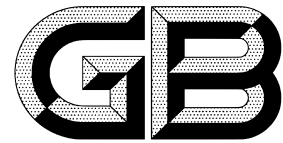


ICS 77.140.45

CCS H 40



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

GB/T 700-2006

Replacing GB/T 700-1988

Carbon structural steels

碳素结构钢

Issued on: November 1, 2006

Implemented on: February 1, 2007

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of the People's Republic of China (SAC)..**

Table of Contents

Foreword

1 Scope

2 Normative references

3 Designation denotation and symbols

4 Dimension, shape, weight and permissible deviation

5 Technical requirements

6 Test methods

7 Inspection rules

8 Packing, marking and quality certificate

Annex A Impact absorbed energy of small-sized impact sample

Foreword

The consistent degree between this Standard and ISO 630:1995 "Structural Steels" is not equivalent. The main differences are as follows:

- Designations of yield strength levels of 185N/mm² and 355N/mm² are not defined;
- Designations Q195 and Q215 are specified to corresponding levels 195N/mm² and 215N/mm²;
- For Q235 class B steel of which the thickness is smaller than 25mm, it may be exempted from inspection, with the consent of the buyer, and if the supplier can ensure that the impact absorbed energy is qualified;
- Cold bending test is added;
- Detailed group-batching rules are specified according to the situation of China.

This Standard replaces GB/T 700-1988 "Carbon Structural Steels". Compared with GB/T 700-1988, the main changes are as follows:

- Semi-killed steel is deleted in "deoxidization method";
- Designation E275 in ISO 630:1995 is newly added, and is changed to new designation Q275;
- "The upper limit of the tensile strength of wide strip steel (including sheared steel plate) is not used as delivery condition" and "Q235 class B steel of which the thickness is smaller than 25mm may be exempted from inspection, with the consent of the buyer, and if the supplier can ensure that the impact absorbed energy is qualified" are added in the footnotes of Table 2;

Annex A of this Standard is normative.

This Standard was proposed by China Iron and Steel Association.

This Standard shall be under the jurisdiction of National Technical Committee for Steel Standardization.

Drafting organizations of this Standard: China Metallurgical Information & Standardization Institute, Capital Iron and Steel Company, and Handan Iron & Steel Group and Benxi Iron & Steel Group Co., Ltd.

The main drafters of this Standard: Tang Yifan, Luan Yan, Wang Liping, Sun Ping, Zhang Xianfeng, and Dai Qiang.

This Standard was first-time issued in January 1965; first revised in October 1979; and revised for the second-time in June 1988.

1 Scope

This Standard specifies the designation, dimension, shape, weight, permissible deviation, technical requirements, test methods, inspection rules, packing, marking, and quality certificate of carbon structural steel.

This Standard is applicable to the structural hot rolled steel sheets, steel strips, sectional steels, and bar steels that are generally used for welding, riveting and bolting engineering in delivery state.

The chemical composition specified by this Standard is also applicable to steel ingots, continuous casting billets, steel billets and their products.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this Standard. For dated references, subsequent amendments (not including corrections) to, or revisions of, any of these publications do not apply. However parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies.

3 Designation denotation and symbols

3.1 Denotation of the designation

The designation of steel is composed of the letter representing yield strength, value of yield strength, symbol of quality grade, and symbol of deoxidization method in sequence. For example: Q235AF.

Q - First letter of Chinese phonetic spelling for the “Qu” word of steel yield strength;

A, B, C, D are respectively quality grade;

F - First letter of Chinese phonetic spelling for the “Fei” word of rimmed steel;

Z - First letter of Chinese phonetic spelling for the “Zhen” word of killed steel;

TZ - First letters of Chinese spelling for the “Tezhen” word of special killed steel.

4 Dimension, shape, weight and permissible deviation

The dimension, shape, weight and permissible deviation of steel sheets, steel strips, sectional steels and bar steels shall meet the specification of the corresponding standards respectively.

5 Technical requirements