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NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

GB/T 5223.3-2017

Replacing GB/T 5223.3-2005

Steel bars for the prestressing of concrete

预应力混凝土用钢棒

(ISO 6934-3:1991, Steel for the prestressing of concrete –
Part 3: Quenched and tempered wire, NEQ)

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Foreword

This Part was drafted in accordance with the rules given in GB/T 1.1-2009.

This Part replaces GB/T 5223.3-2005, *Steel Bars for Prestressed Concrete*. Compared with GB/T 5223.3-2005, the major technical changes are as follows:

- it cancels the common relaxation varieties of prestressed steel bars;
- it adds the specifications of steel bars (see Clause 6);
- it cancels cross sectional area measurement for plain steel bars and adds the specifications for diameter tolerances (see 6.1);
- it changes the cross sectional area measurement of helical grooved steel bars and helical ribbed steel bars into the weight per m measurement, and adjusts the weight tolerances for helical ribbed steel bars (see 6.2 and 6.3);
- it increases the requirement for coil weight (see 6.6);
- it adds the dimensional measurement for steel bars (see 8.2.1);
- the test method is changed into as specified in GB/T 21839 (8.4.1).

This Standard was redrafted by referencing ISO 6934-3:1991, *Steel for the prestressing of concrete – Part 3: Quenched and tempered wire*. This Standard is not equivalent to ISO 6934-3:1991, the major technical changes are as follows:

- quenched and tempered steel wires are changed into steel bars for prestressed concrete;
- it adds helical ribbed steel bars;
- it adds strength levels;
- it adds the specifications of steel bars;
- it adds the indexes of elongation after fracture as a routine inspection item;
- it adds impact test for the helical ribbed steel bars for mine supporting projects.

This Standard was proposed by China Iron and Steel Association.

This Standard shall be under the jurisdiction of National Technical Committee 183 on Steels of Standardization Administration of China (SAC/TC 183).

The drafting organizations of this Standard: Shenyang Super Steel Bar Co., Ltd.,

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The previous editions of the standard replaced by this Standard are as follows:

- GB/T 4463-1984;
- GB/T 5223.3-2005.

Steel bars for the prestressing of concrete

1 Scope

This Standard specifies the terms and definitions, classification, codes and designation, ordering content, dimensions, shapes, weights and tolerances, technical requirements, test methods, inspection rules, packaging, marking and quality certification for steel bars for the prestressing of concrete.

This Standard applies to plain, helical grooved, helical ribbed and ribbed round bars for the prestressing of concrete.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition dated applies to this document. For undated references, the latest edition of the referenced documents (including all amendments) applies to this document.

GB/T 229, *Metallic materials - Charpy pendulum impact test method*

GB/T 2101-2008, *General requirement for acceptance, packaging, marking and certification for section steel*

GB/T 2103-2008, *General requirements for acceptance, packing, marking and quality certification of steel wire*

GB/T 14981-2009, *Dimension, shape, mass and tolerance for hot-rolled round wire rod*

GB/T 21839, *Steel for prestressed concrete – Test methods*

GB/T 24587, *Hot-rolled wire rods for prestressing steel bars of concrete*

YB/T 081, *Rule for rounding off of numerical values and judgement of testing values for technical standards of metallurgy*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.