

ICS 77.140.60

CCS H 44



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

GB/T 33959-2017

Stainless steel bars for the reinforcement of concrete

钢筋混凝土用不锈钢钢筋

Issued on: July 12, 2017

Implemented on: April 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine;
Standardization Administration of the PRC**

Table of Contents

1 Scope

Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. This standard is proposed by China Iron and Steel Industry Association. This standard is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183). The drafting of this standard. China Metallurgical Building Research Institute Co., Ltd., Shanxi TISCO Stainless Steel Co., Ltd., Guangxi Shenglong Metallurgical Limited Company, Shougang Corporation, Metallurgical Industry Information Standards Institute, Wuzhou Yongda Steel Co., Ltd., Zhejiang Fu Steel Metal Products Co., Ltd., Panzhihua Iron and Steel Group Jiangyou Great Wall Special Steel Co., Ltd., Xingtai Iron and Steel Co., Ltd., Foshan Pu Tie Stainless Steel Co., Ltd. The main drafters of this standard. Zhu Jianguo, Wang Hui Mian, Li Xiaobin, Ke Xueli, Di Quankang, Wang Yujie, Li Yukun, Qian Yijia, Zhou Maohua, Bai Liguang, Wang Shuo, Zhang Jiansheng, Wang Changcheng, Liu Baoshi, Gong Cui, Liu Yongji, Pan Yijie, Yang Yaguang, An Jingtao, Chen Jie, Guo Wenquan. Stainless steel bars for reinforced concrete

1 Scope

China's national standard for stainless steel reinforcing bar. It specifies the terms and definitions, the order content, the classification, grades, dimensions, shape, weight and permitted deviations, the technical requirements, the test methods, the inspection rules and the packaging, marking and quality certificate, and it applies to hot-rolled plain and ribbed bars for reinforced concrete in building, transport, railway and port works. Ordinary reinforcement is carbon steel, and it survives in concrete because fresh concrete is strongly alkaline and holds a passive film on the steel. That protection fails when chloride reaches the bar - from de-icing salt on a bridge deck, from seawater on a marine structure - and the corroding steel expands and splits the concrete off. Repairing that is expensive and disruptive out of all proportion to the cost of the bar. Stainless reinforcement is several times the price and is specified for the parts of a structure where replacement is impractical: the splash zone of a sea wall, the deck of a bridge intended to last a century.

This standard specifies the terms and definitions of stainless steel bars for reinforced concrete, order contents, classification, grade, size, shape, weight and allow Tolerances, technical requirements, test methods, inspection rules, packaging, marking and quality certificates. This standard applies to the construction, transportation, railways, ports and other reinforced concrete with hot round, with ribbed stainless steel (hereinafter referred to

as steel).

2 Normative reference documents

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

GB/T 222 Determination of chemical composition of finished steel

GB/T 223.3 Methods for chemical analysis of iron, steel and alloy The diantipyrylmethane phosphomolybdic acid gravimetric method for the determination of phosphorus Iron and steel - Determination of manganese content - Potentiometric titration or visual titration

GB/T 223.5 Determination of silicon and total silicon content of iron and silicon in steel - Reduced molybdosilicate spectrophotometric method Steel and alloys - Determination of chromium content - Visual titration or potentiometric titration

GB/T 223.17 Methods for chemical analysis of iron, steel and alloy The diantipyrylmethane photometric method for the determination of titanium content Iron and steel - Determination of nickel content - Butadiene oxime spectrophotometric method GB/T

GB/T 223.25 Methods for chemical analysis of iron, steel and alloy - The dibutyl ketoxime gravimetric method for the determination of nickel content Iron and steel - Determination of molybdenum content - Thiocyanate spectrophotometric method GB/T

GB/T 223.28 Methods for chemical analysis of iron, steel and alloy The alpha-benzooxime gravimetric method for the determination of molybdenum content

GB/T 223.36 Methods for chemical analysis of iron, steel and alloy - Distillation separation - Neutralization titration for the determination of nitrogen content

GB/T 223.37 Methods for chemical analysis of iron, steel and alloy - Distillation separation - indophenol blue photometric method for the determination of nitrogen content

GB/T 223.58 Methods for chemical analysis of iron, steel and alloy The sodium arsenite - sodium nitrite titration method for the determination of manganese content

GB/T 223.59 Determination of phosphorus content of iron, steel and alloy - Bismuth phosphorus molybdenum blue spectrophotometric method and antimony phosphomolybdenum blue spectrophotometric method

GB/T 223.60 Methods for chemical analysis of iron, steel and alloy - Perchloric acid dehydration gravimetric method for the determination of silicon content

GB/T 223.63 Methods for chemical analysis of iron, steel and alloy The sodium periodate (potassium) spectrophotometric method for the determination of manganese content Iron and steel - Determination of sulfur content - Dimethyl blue spectrophotometric method

GB/T

GB/T 223.71 Methods for chemical analysis of iron, steel and alloy The post-combustion gravimetric method for the determination of carbon content Steel and alloys - Determination of sulfur content - Gravimetric method GB/T Iron and steel - Determination of sulfur content - Inhalation infrared absorption method after induction furnace GB/T Iron and steel - Determination of total carbon content - Infrared absorption method after induction furnace combustion Metallic materials - Tensile testing - Part 1. Test methods for room temperature GB/T