

ICS 77.140.60

CCS H44



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

GB/T 43665-2024

Hot rolled bars of rare earth for reinforcement of concrete

钢筋混凝土用热轧稀土钢筋

Issued on: March 15, 2024

Implemented on: October 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Foreword	i
1 Scope	
2 Normative references	
3 Terms and definitions	
4 Classification and designation	
5 Order information	
6 Dimension, shape, weight and permissible deviation	
7 Technical requirements	
8 Test methods	
9 Inspection rules	
10 Packaging, marking and quality certification	

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the China Iron and Steel Association. This document is under the jurisdiction of the National Technical Committee on Steel Standardization (SAC/TC183). This document was drafted by: Yancheng Lianxin Steel Co., Ltd., Guangxi Shenglong Metallurgical Co., Ltd., Jiangsu Yonggang Group Co., Ltd., Metallurgical Industrial Information Standards Research Institute, Tongling Fuxin Steel Co., Ltd., Shiheng Special Steel Group Co., Ltd., Chengdu Metallurgical Experimental Plant Co., Ltd., Hu Beijin Shenglan Metallurgical Technology Co., Ltd., Lianyungang Xingxin Steel Co., Ltd., Shanghai University, Jiangxi Taixin Steel Co., Ltd., Jiangsu Binxin Iron and Steel Group Co., Ltd., Yangchun New Iron and Steel Co., Ltd., Benxi Beiyong Iron and Steel (Group) Co., Ltd., CITIC Metal Co., Ltd. Company, Shougang Group Co., Ltd., Sichuan Desheng Group Vanadium Titanium Co., Ltd., Anhui Nuotai Engineering Technology Co., Ltd., Quzhou Yuanli Metal Products Co., Ltd., China Steel Shijiazhuang Engineering Design and Research Institute Co., Ltd., and Steel Research Institute Shenghua Technology Co., Ltd. The main drafters of this document are: Dong Han, Wang Changcheng, Ke Xueli, Xie Jixiang, Liu Baoshi, Ma Zhenghong, Kuang Yonghai, An Zengchao, Wang Yujie, Wang Kaijian, Yang Yong, Wang Yuanting, Lu Hengchang, Dong Jianlin, Lin Tao, Fan Yaogui, Wang Yunguo, Zhang Yongqing, Zhou Yuli,

Wu Qiang, Huang Yuhong, Zhang Huilin, Fan Zengwei, Zhou Hemin, Chen Lisheng, Chen Xiaoping, Liu Liangqing, Hou Xinghui, Wang Changsheng, Zhou Zhisuo, Guo Xueyu, Zheng Guizeng, Xu Haochi, Deng Keling, Zhang Baomin, Peng Canfeng, Li Yan, Luo Yi, Di Quankang, Deng Cheng, Liu Shen, Su Ni, Hua Zheng, Li Xuezhao, Shen Pengfei. Hot rolled rare earth steel bars for reinforced concrete

1 Scope

GB/T 43665-2024 is the Chinese standard for hot rolled rare earth steel bar for the reinforcement of concrete. Rare earth microalloying is a distinctively Chinese route, using cerium and lanthanum additions to modify the inclusions and refine the structure so that strength and toughness are gained without the alloy content a conventional route would need, and China has the rare earth supply to make it economic at reinforcement volumes. The standard sets the classification and grades, the order information, the dimensions, shape, weight and permissible deviations including the rib geometry that governs bond, the technical requirements covering chemical composition, mechanical and technological properties and the surface condition, the test methods, the inspection rules and the packaging, marking and quality certification. It applies to hot rolled plain round and ribbed bars of rare earth steel. It takes effect on 1 October 2024, and for a mill or a designer working with this material it is the acceptance text.

This document specifies the classification and grade, ordering content, size, shape, weight and allowable deviation of hot-rolled rare earth steel bars for reinforced concrete. Technical requirements, test methods, inspection rules, packaging, marking and quality certificates. This document applies to hot-rolled rare earth plain round steel bars and ribbed steel bars (hereinafter referred to as steel bars) for reinforced concrete.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 222 Permissible deviation of chemical composition of finished steel products

GB/T 223.5 Determination of acid-soluble silicon and total silicon content of iron and steel - Reduced molybdenum silico-silicic acid spectrophotometric method

GB/T 223.14 Chemical analysis methods for iron, steel and alloys - Tantalum extraction spectrophotometric method for determination of vanadium content

GB/T 223.37 Determination of nitrogen content in iron, steel and alloys - Spectrophotometric method using indophenol blue distillation separation

GB/T 223.40 Determination of niobium content in iron, steel and alloys - Chlorosulfonphenol S spectrophotometric method

GB/T 223.49 Chemical analysis methods for iron, steel and alloys - Extraction separation - Chlorophosphonazo mA spectrophotometric method for the determination of total rare earth

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

GB/T 223.63 Determination of manganese content in iron, steel and alloys - Sodium (potassium) periodate spectrophotometric method

GB/T 223.85 Determination of sulfur content in iron, steel and alloys - Infrared absorption method after combustion in an induction furnace

GB/T 223.86 Determination of total carbon content of steel and alloys - Infrared absorption method after combustion in an induction furnace

GB/T 1499.1 Steel for reinforced concrete Part