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PEOPLE'S REPUBLIC OF CHINA**

GB/T 47079-2026

Technical specification for the induction heat treatment of rolls

轧辊感应热处理技术规范

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Iron and Steel Association. This document is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183). This document was drafted by: China Steel Group Xingtai Machinery Roll Co., Ltd., Yixing Guochang Roll Co., Ltd., and Baosteel Roll Technology Co., Ltd. Limited Liability Company, Metallurgical Industry Information and Standardization Research Institute, Zhongtian Iron & Steel Group Co., Ltd., Chengdu Advanced Metal Materials Industry Technology Research Institute Co., Ltd. Limited Liability Company, Jiangsu Keda Heavy Industry Co., Ltd., Xingtai Dejin Precision Machinery Manufacturing Co., Ltd., Changsha Jinduo Machinery Co., Ltd., Hunan Lifang Roll Co., Ltd., Beijing University of Technology, Zhejiang University, and Huadian Electric Power Research Institute Co., Ltd. The main drafters of this document are: Yang Yudong, Han Weiguo, Shao Lijun, Chen Wei, Zhang Ruopeng, Wang Liyin, Ge Xiaohong, Xin Shengpeng, Zhu Jian, and Zhang Qing. Jin Feng, Tian Xiaolin, Qian Baineng, Liang Jianli, Xiao Zeyang, Zhou Qinzong, Qiu Jinhui, Cui Haifeng, Ye Yukui, Yao Jie, Xi Guoxian, Fang Ping, Xu Yunpeng Qin Bo, Wang Hui, Zhang Guimin, Ma Fengchuan, Wang Jiangwei, Xu Shichang, Ding Zemiao, Liu Jianning, Chen Jian, Zhang Zhiqiang, Zhou Jianming, Yan Hongxia, Peng Longsheng Yang Jing, Sun Xizhao, Yu Jingyao, Zhang Yuanchun, Fu Hanguang, Tian Linan. Technical Specifications for Induction Heat Treatment of Rolls

1 Scope

GB/T 47079-2026 is the Chinese national standard covering induction hardening a mill roll - heating only the working surface to depth and quenching it, so the barrel is hard where it touches the strip and tough underneath, on a component that costs a fortune and cracks if the treatment is wrong. First edition, and it belongs with GB/T 47996-2026 on composite rolls published earlier in the year. It was issued on 28 January 2026 and has been in force

since 1 August 2026, as a first edition. The document is under the responsibility of the China Iron and Steel Association. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 1503 Cast steel rolls

GB/T 1504 Cast iron rolls

GB/T 7232 Terminology for Heat Treatment of Metals

GB/T 7704 Nondestructive testing method for X-ray stress determination

GB/T 13313 Test methods for Shore and Leeb hardness of rolling mill rolls

GB/T 13314 General Technical Requirements for Forged Steel Cold Rolling Work Rolls

GB/T 13324 Terminology for Heat Treatment Equipment

GB/T 15546 Metallurgical Roll Terminology

GB 15735 Safety and hygiene requirements for metal heat treatment processes

GB/T 17394.1 Metallic materials - Leeb hardness test - Part

GB/T 23904 Nondestructive testing - Ultrasonic surface wave detection method

GB/T 31310 Determination of Residual Stress in Metallic Materials - Drilling Strain Method

GB/T 46218 Support Rollers

JB/T 3733 Technical Conditions for Large Forged Alloy Steel Hot Rolls

JB/T 9204 Metallographic Inspection of Induction Hardened Steel Parts

JB/T 9205 Metallographic Inspection of Induction Hardened Pearlitic Ductile Iron Parts

3 Terms and Definitions

The terms and definitions defined in GB/T 15546, GB/T 13324 and GB/T 7232, as well as the following terms and definitions, apply to this document.

3.1 Heat treatment is performed after the roll is heated to a predetermined temperature by generating eddy currents on the surface of the roll using electromagnetic induction.

Note. This includes induction hardening, induction tempering, and induction annealing.

[Source: GB/T 7232-2023, 3.1.8, with modifications]

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