

ICS 77.140.25

CCS H 40

GB

NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

GB/T 1222-2025

Replacing GB/T 1222-2016, GB/T 33164.1-2016, GB/T 33164.2-2016

Spring Steels

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Issued on: October 31, 2025

Implemented on: May 1, 2026

Issued by: State Administration for Market Regulation;

Standardization Administration of the People's Republic of China.

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 *Directives for Standardization – Part 1: Rules for the Structure and Drafting of Standardizing Documents*.

This Document replaced GB/T 1222-2016 *Spring Steels*, GB/T 33164.1-2016 *Spring Steels for Automotive Suspension System - Part 1: Hot Rolled Spring Steel Flat Bars*, and GB/T 33164.2-2016 *Spring Steels for Automotive Suspension System - Part 2: Hot Rolled Round Steel Bar and Wire Rod*. This Document is mainly based on GB/T 1222-2016, integrating the contents of GB/T 33164.1-2016, and GB/T 33164.2-2016. Compared with GB/T 1222-2016, the major technical changes of this Document are as follows besides the structural adjustments and editorial modifications:

- a) Change the scope of application of the standard (see Clause 1 of this Edition; Clause 1 of the 2016 Edition);
- b) Change the ordering contents (see Clause 4 of this Edition; Clause 4 of the 2016 Edition);
- c) Change the requirements for copper content and silicon content in 60Si2Mn (see 6.1.1 of this Edition; 6.1.1 of the 2016 Edition);
- d) Add grouping by phosphorus and sulfur contents (see 6.1.2 of this Edition);
- e) Change the oxygen content requirements in alloy spring steel (or billets) (see 6.1.3 of this Edition; 6.1.2 of the 2016 Edition);
- f) Delete the 40SiMnVBE designation and its related requirements (see Clause 6 of the 2016 Edition);
- g) Change the mechanical property requirements for 60Si2Mn (see 6.3 of this Edition; 6.4 of the 2016 Edition);
- h) Add hardenability requirements for 60CrMnB (see 6.4 of this Edition);
- i) Change the requirements for low magnification (see 6.5 of this Edition; 6.6 of the 2016 Edition);
- j) Change the requirements for non-metallic inclusions (see 6.6 of this Edition; 6.7 of the 2016 Edition);
- k) Change the requirements for decarburized layers (see 6.7 of this Edition; 6.8 of the 2016 Edition);
- l) Add grain size requirements (see 6.8 of this Edition);
- m) Change the surface quality requirements (see 6.9 of this Edition; 6.9 of the 2016 Edition);

- n) Change the nominal dimension, permissible deviation and length of hot-rolled flat bar (see E.1 of this Edition; A.1 of the 2016 Edition).

Please note some contents of this Document may involve patents. The issuing agency of this Document shall not assume the responsibility to identify these patents.

This Document was proposed by China Iron and Steel Association.

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

Drafting organizations of this Document: Jiangyin Xingcheng Special Steel Works Co., Ltd.; Fangda Special Steel Technology Co., Ltd.; Daye Special Steel Co., Ltd.; Qingdao Special Steel Co., Ltd.; Jiangsu Yonggang Group Co., Ltd.; China National Heavy Duty Truck Group Co., Ltd.; Hunan Valin Xiangtan Iron & Steel Co., Ltd.; Nanjing Iron and Steel Co., Ltd.; Shougang Group Co., Ltd.; Fushun Special Steel Co., Ltd.; China Metallurgical Information and Standardization Institute; Jiangsu Lihuai Iron & Steel Co., Ltd.; Lingyuan Iron & Steel Co., Ltd.; Linyi Iron & Steel Investment Group Special Steel Co., Ltd.; and Zhejiang Gold Intelligent Suspension Co., Ltd.

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The historical editions replaced by this Document are as follows:

- GB/T 1222 was first-time published in 1975; first-time revised in 1984; second-time revised in 2007; and third-time revised in 2016;
- It is fourth-time revised hereby, integrating the contents of GB/T 33164.1-2016 *Spring Steels for Automotive Suspension System - Part 1: Hot Rolled Spring Steel Flat Bars*, and GB/T 33164.2-2016 *Spring Steels for Automotive Suspension System - Part 2: Hot Rolled Round Steel Bar and Wire Rod*.