

ICS 77.140.25

H 40



NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 1222-2016

Replacing GB/T 1222-2007

Spring steels

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Issued on: December 13, 2016

Implemented on: September 01, 2017

Issued by: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of the People's Republic of China.

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Foreword

The Standard is drafted according to the rules given in GB/T 1.1-2009

The Standard replaces GB/T 1222-2007 “Spring steels”. Compared with GB/T 1222-2007, the main technical changes of this Standard are as follows:

- The diameter of spring round steels and the side length of spring square steels are extended to 120 mm. The thickness of spring flat steels is extended to 60 mm. The diameter of the spring steel wire rods is extended to 40 mm (see Clause 1);
- ADD terms and definitions (see Clause 3);
- ADD 11 steel grades, i.e. 80, 70Mn, 38Si2, 40SiMnVBE, 55SiCrV, 56Si2MnCr, 60CrMnMo, 52CrMnMoV, 60Si2MnCrV, 52Si2CrMnNi, and their relevant technical requirements. Among them, 40SiMnVBE is the patented grade (see 6.1.1, 6.4, Annex B and Annex C);
- ADJUST the composition range of some steel grades, and ADD the requirements for phosphorus content and sulphur content (see Table 1);
- ADD the requirements for oxygen content for alloy spring steels (see 6.1.2);
- TIGHTEN the qualification level of macro defects (see 6.6.2 of this Standard, 5.6.2 of 2007 edition);
- GROUPE the qualification level of nonmetallic inclusions, and ADD the requirement for the DS type inclusion (see 6.7 of this Standard, 5.7 of 2007 edition);
- TIGHTEN the requirements for the decarburization layer depth of hot-rolled steels and GROUP it (see 6.8.1 of this Standard, 5.8.1 of 2007 edition);
- ADD two cross-section shapes, i.e. plane great circle spring flat steel and plane rectangular spring flat steel, and their dimension requirements; CANCEL the cross-section shape of single-sided double-groove spring flat steel and its relevant requirements (see Annex A);
- ADD the main usage of different steel grades and the comparison table of national and international steel grades (see Annex B and Annex C).

This Standard was proposed by China Iron and Steel Industry Association

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

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The previous released versions replaced by this Standard are as follows:

-GB/T 1222-1975, GB/T 1222-1984, GB/T 1222-2007.

Introduction

The issuing authority of this document draws attention to the fact that, when the statement complies with this document, the relevant contents of Table 1, 6.1.2, Table 3, Table 4, D.2 and E.2 of this document relate to the use of 40SiMnVBE patented steel.

The issuing authority of this document takes no stand on the authenticity, validity and scope of patents.

The patent holder has assured the issuing authority of this document that he is willing to negotiate with any applicant on a reasonable and non-discriminatory terms and conditions regarding licensing of patents. The patent holder's statement has been filed with the issuing authority of this document. Related information can be obtained by the following way:

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