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

GB/T 23934-2015

Replacing GB/T 23934-2009

**Hot formed helical compression springs -- Technical
Requirement**

热卷圆柱螺旋压缩弹簧 技术条件

(English Translation)

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Table of Contents

Foreword

1 Scope

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This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard replaces GB/T 23934-2009 "hot coiled helical compression spring technical conditions." And GB/T 23934-2009 phase Ratio, the main technical changes are as follows.

- Adds symbols and units;
- Modify the scope;
- Modify the normative references;
- Remove the structure type;
- Increased spring structure;
- Revised test methods.

This standard uses redrafted Law Amendment uses ISO 11891:2012 "hot rolled coil compression spring technical conditions." this standard and ISO 11891:2012 as compared to the presence of the technical differences between the terms of these differences has been involved through its outer margin bits Opposing vertical single line (|) were marked.

This standard and ISO 11891:2012 technical differences and their reasons are as follows.

- Modify the normative references (see Chapter 2);
- Modify the symbols and units (see Chapter 4);
- Increased material GB/T 1222 selection (see 5.1);
- Modifies the bar tolerances into GB/T 702-2008 (see 5.2);
- Increase the permanent deformation (see 8.5,10.2);
- Modify harmful defects (see 9.5);
- Revised Figure 3 (see 10.4.3);
- Added a test load calculation (see Appendix A);
- Added a common spring steel tensile strength - hardness correspondence (see

Appendix B).

The standard proposed by the Machinery Industry Federation.

The standard spring by the National Standardization Technical Committee (SAC/TC235) centralized.

1 Scope

This standard specifies the round-section steel bar after hot roll forming, quenching, tempering ordinary cylindrical helical compression spring (hereinafter referred to as "bomb Other special requirements of spring ") the material, structure type, spring characteristics, tolerances, manufacturing requirements and test methods and so on. Railway can Referring use.

This standard applies to the following dimensions of the spring, beyond this size range spring negotiated by both sides can refer to the use of.

--- Free height. $\leq 900\text{mm}$;

--- Winding ratio. 3 to 12;

--- Aspect ratio. 0.8 to 4;

--- Effective number of turns. ≥ 3 ring;

--- Pitch. 2 Normative references the following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 224 Determination of depth of decarburization of steel method (GB/T 224-2008, ISO 3887:2003, MOD) GB/T 230.1 metallic materials - Rockwell hardness test - Part 1. Test methods (A, B, C, D, E, F, G, H, K, N, T standard Feet) (GB/T 230.1-2009, ISO 6508-1:2005, MOD) GB/T 231.1 metallic materials Brinell hardness test - Part 1. Test method (GB/T 231.1-2009, ISO 6506-1.

2005, MOD)

GB/T 702-2008 Hot-rolled steel bars - Dimensions, shape, weight and tolerances (GB/T 702-2008, ISO 1035-1. 1980, ISO 1035-2. 1980, ISO 1035-3. 1980, ISO 1035-4. 1980, MOD) GB/T 1222 spring steel GB/T 1805 spring term GB/T 6394 Determination of average grain size of metal GB/T 8170 repair value expressed about the rules and limit values \u200b\u200band judgment Part of GB/T 31214.1 spring Shot 1. General JB/T 7796-2005 spring tension and compression testing machine JB/T 10802-2007 spring shot peening specifications ISO 683-14 heat-treated steels, alloy steels and free cutting steels - Part 14. quenched and tempered springs - hot rolled steel (Heat-treatable steels,

alloy steels and free-cutting steels-Part 14. Hot-rolled steels for quenched and tempered springs)
ISO 9588 Metallic and other inorganic coatings to reduce the risk of hydrogen
embrittlement of the steel after the coating process
(Metallic and other inorganic coatings-Post-coating treatments of iron or steel to reduce the risk of hydrogen embrittlement)