AS 1472—2003
Reconfirmed 2016

Australian Standard™

Carbon steel spring wire for mechanical springs

Standards Australia

This Australian Standard was prepared by Committee MT-001, Iron and Steel. It was approved on behalf of the Council of Standards Australia on 16 December 2002 and published on 8 January 2003.

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Australasian Railway Association

Australian Building Codes Board

Australian Chamber of Commerce and Industry

Australian Industry Group

Australian Foundry Institute

Australian Institute of Steel Construction

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This Standard was issued in draft form for comment as DR 02410.

STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 1472—2003
Carbon steel spring wire for mechanical springs

RECONFIRMATION NOTICE

Technical Committee MT-001 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 25 November 2015.

The following are represented on Technical Committee MT-001:

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Australian Standard™

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee MT-001, Iron and Steel. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify requirements and tests for carbon steel spring wire of round cross-section for the manufacture of mechanical springs. Four types, or conditions, of spring wire are covered.

During revision of this Standard cognisance was taken of the three-part International Standard ISO 8458, *Steel wire for mechanical springs*. The Committee decided against its adoption as an Australian Standard because it does not cover the full range of mechanical spring wires used by Australian industry, and it imposes unacceptable restrictions on wire manufacturing practice.

Notable changes that have been introduced in the revised Standard relate to wire diameter tolerances, which have been rationalized, and to coil presentation and cast, which are now more clearly specified. The Standard has been expanded in respect of optional drawn metallic coatings and now includes zinc/aluminium-alloy coatings. The coating class, previously unspecified, for both zinc and zinc/aluminium-alloy coatings has been set at W02.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which is applies. An ‘informative’ appendix is only for information and guidance.

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1 SCOPE

This Standard specifies requirements for carbon steel spring wire of round cross-section for mechanical springs, supplied in one of the following conditions:

(a) Hard-drawn.

(b) Drawn metallic coated, e.g. drawn-galvanized.

(c) Oil-hardened and tempered.

(d) Soft-drawn.

This Standard applies to wire supplied in the form of coils. It does not cover the testing of wire that is supplied in mechanically straightened cut-lengths, or wire that has been straightened by the user.

NOTES:

1 Spring wires for bedding and seating applications are covered by AS 2266.

2 In this Standard the term 'drawing', alone or in combination, or a variation of 'drawing', such as 'drawn', is intended to embrace any other technically feasible means, such as 'rolling', by which cold-working of steel feedstock enables wire of round cross-section to be achieved.

3 Mechanical straightening introduces small, but significant, changes in diameter and mechanical properties (e.g. tensile strength) of as-drawn spring wire, and the degree of change varies with the straightening technique employed.

4 Advice and recommendations on information to be supplied by the purchaser at the time of enquiry or order are contained in the purchasing guidelines set out in Appendix A.

5 Alternative means for determining compliance with this Standard are given in Appendix B.

2 REFERENCED DOCUMENTS

The documents below are referred to in this Standard:

AS	
1199	Sampling procedures and tables for inspection by attributes
1391	Methods for tensile testing of metals
1399	Guide to AS 1199—Sampling procedures and tables for inspection by attributes
1442	Carbon steels and carbon-manganese steels—Hot-rolled bars and semifinished products
2266	Carbon steel spring wire for bedding and seating
2338	Preferred dimensions of wrought metal products
2505	Metallic materials
2505.5	Method 5: Wire—Simple torsion test
2505.6	Method 6: Wire—Wrapping test
2706	Numerical values—Rounding and interpretation of limiting values
3942	Quality control—Variables charts—Guide

