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Wire

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Australian Standard 2266—1979

CARBON STEEL SPRING WIRE FOR BEDDING AND SEATING

[Title allocated by Defence Cataloguing Authority:
WIRE, NON-ELECTRICAL (For Bedding and Seating Springs)]



STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter



THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Council of Furniture Manufacturers

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

Department of Defence

Department of Productivity

Institute of Steel Service Centres of Australia

Metal Trades Industry Association of Australia

Railways of Australia Committee

Society of Automotive Engineers, Australasia

Spring Manufacturers' Association of Australia

This standard, prepared by Committee MT/1, Iron and Steel, was approved on behalf of the Council of the Standards Association of Australia on 28 February 1979, and was published on 1 July 1979.

To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

This standard was issued in draft form for public review as DR 78020.

AUSTRALIAN STANDARD

**CARBON STEEL
SPRING WIRE FOR
BEDDING AND SEATING**

AS 2266—1979

First published 1979

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PREFACE

This standard was prepared under the direction of the Association's Committee on Iron and Steel by its subcommittee on steel spring wire as the result of a request from the Association's Committee on Mattresses, and consultation with the Australian automotive industry. It applies, in particular, to uncoated carbon steel spring wire of round cross-section, supplied in the hard-drawn condition in the form of coils, intended for the manufacture of coiled, square-formed, and sinuous springs for application in mattresses, furniture and automotive seating.

In the preparation of this standard, cognizance was taken of the following British and American specifications:

- | | |
|------------|--|
| BS 4637 | Carbon Steel Wire for Coiled Springs (Bedding and Seating) |
| BS 5216 | Patented Cold Drawn Carbon Steel Wire for Mechanical Springs |
| ASTM A 417 | Steel Wire, Hard-drawn, for Zig-zag, Square-formed, and Sinuous-type Upholstery Spring Units |
| AISI | Steel Product Manual for Wire and Rods, Carbon Steel. |

Appendix A presents purchasing guidelines including contractual requirements and directs attention to matters requiring consideration at the time of enquiry and/or order. The intention is to avoid misinterpretation or other problems and to ensure a clear understanding of product requirements by both supplier and purchaser.

This standard requires reference to the following standards and publications:

- | | |
|-----------|---|
| AS 1050 | Methods for the Analysis of Iron and Steel (Metric Units) |
| AS 1153 | Preferred Metric Sizes of Ferrous and Non-ferrous Round Wire for General Engineering Purposes |
| AS 1213 | Methods for the Sampling of Iron, Steel, Permanent Magnet Alloys and Ferro-alloys |
| AS K1 | Method for the Sampling and Analysis of Iron and Steel |
| SAA MP19 | Report on Preferred Numbers and Their Use |
| ISO/R 388 | ISO Metric Series for Basic Thicknesses of Sheet and Diameters of Wire |
| BS 4545 | Methods for Mechanical Testing of Steel Wire |

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard for CARBON STEEL SPRING WIRE FOR BEDDING AND SEATING

1 SCOPE. This standard specifies requirements for uncoated carbon steel spring wire of round cross-section, supplied in the hard-drawn condition in the form of coils and intended for the manufacture of coil springs, square-formed springs and sinuous springs.

NOTES:

1. The springs are intended for bedding and seating used in the automotive, transport and furniture manufacturing industries, as appropriate.
2. Guidelines to purchasers on requirements that must be specified by the purchaser and those that must or may be agreed at the time of enquiry and or order are given in Appendix A.

2 DEFINITIONS. For the purpose of this standard, the following definitions apply:

Hard-drawn—carbon steel wire drawn with a relatively high reduction of cross-sectional area from a heat-treated (patented or similar process) base. The microstructure of such material consists of heavily elongated pearlite.

Cast—the form taken by the individual waps (turns or circles) of a wire in a coil.

NOTES:

1. One of the characteristics of cast is the wap diameter; this should be uniform and will normally be about the coil diameter, which approximates the block diameter.
2. A second characteristic is the tendency of the wire to spiral; this should be uniform between one wap and another, but is normally preferred approaching zero.

3 STEELMAKING PROCESS. The steel shall be made by an open hearth, a basic oxygen or an electric process. For the purpose of this standard, a basic oxygen process means the process of making steel in a basic converter blown with commercially pure oxygen.

4 CHEMICAL COMPOSITION.

4.1 General. The method of sampling for chemical analysis shall be in accordance with AS 1213. Chemical composition shall be determined by any of the procedures commonly used such as emission spectroscopy, X-ray spectroscopy, flame atomic absorption spectroscopy, combustion techniques or classical volumetric or gravimetric methods (see also Paragraph A7.2 of Appendix A).