

Australian Standard[®]

Railway permanent way material

**Part 13: Spring fastening spikes
for sleeper plates**

This Australian Standard was prepared by Committee CE/2, Railway Permanent Way Materials. It was approved on behalf of the Council of Standards Australia on 31 October 1997 and published on 5 January 1998.

The following interests are represented on Committee CE/2:

- Australasian Railway Association
 - Australian Chamber of Manufactures
 - Bureau of Steel Manufacturers of Australia
 - Cement and Concrete Association of Australia
 - Rail Track Association of Australia
-

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standard users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Information of any inaccuracy or ambiguity found in an Australian Standard should be made without delay so that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 97061.

Australian Standard[®]

Railway permanent way material

**Part 13: Spring fastening spikes
for sleeper blades**

Originated as AS 1085.13—1990.
Second edition 1998.

PREFACE

This Standard was prepared by the Standards Australia Committee CE/2, Railway Permanent Way Materials, to supersede AS 1085.13—1990.

The objective of this Standard is to provide manufacturers and purchasers with requirements for spring fastening spikes for use in railway permanent way.

Changes incorporated in this edition are mostly minor and include the following:

- (a) For materials, manganese is allowed in the range 0.8 to 1.1%.
- (b) The method of heat treatment is no longer specified.
- (c) The testing requirement before tempering has been removed.
- (d) An appendix providing information on means for demonstrating compliance with this Standard has been added.

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

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	<i>Page</i>
1 SCOPE	4
2 REFERENCED DOCUMENTS	4
3 PURPOSE AND CONTEXT OF USE	4
4 DESIGNATION	5
5 MATERIAL	5
6 DIMENSIONS AND TOLERANCES	5
7 MANUFACTURE	5
8 MICROSTRUCTURE	5
9 FINISH	5
10 COATING	5
11 TESTING	5
12 MARKING	5
APPENDICES	
A INFORMATION TO BE SUPPLIED BY THE PURCHASER	9
B MEANS FOR DEMONSTRATING COMPLIANCE WITH THIS STANDARD	10

STANDARDS AUSTRALIA

Australian Standard

Railway permanent way material

Part 13: Spring fastening spikes for sleeper plates

1 SCOPE This Standard specifies requirements for steel spring fastening spikes (hereinafter referred to as 'spikes') for use with sleeper plates manufactured in accordance with AS 1085.3, AS 1085.9 and AS 1085.16 on timber sleepers.

NOTES:

- 1 Appendix A contains information that should be provided by the purchaser at the time of enquiry or order.
- 2 Failure of these spikes in tracks can remain hidden for some time as the spike can break below the level of the sleeper plate.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

- | | |
|------|--|
| 1171 | Methods for magnetic particle testing of ferromagnetic products and components |
| 1199 | Sampling procedures and tables for inspection by attributes |
| 1399 | Guide to AS 1199—Sampling procedures and tables for inspection by attributes |
| 1442 | Carbon steels and carbon-manganese steels—Hot-rolled bars and semi-finished products |
| 1815 | Metallic materials—Rockwell hardness test |
| 2003 | Carbon and low alloy steels—Measurement of decarburization |

AS/NZS

- | | |
|------------|--|
| ISO 9000 | Quality management and quality assurance standards |
| ISO 9000.1 | Part 1: Guidelines for selection and use |
| ISO 9004 | Quality management and quality system elements |
| ISO 9004.1 | Part 1: Guidelines |

SAA

- | | |
|---------|--|
| HB18 | Guidelines for third-party certification and accreditation |
| HB18.28 | Guide 28—General rules for a model third-party certification system for products |

3 SCOPE AND CONTEXT OF USE

3.1 Function Spring fastening spikes are used to secure sleeper plates to timber sleepers in railway permanent way.

NOTE: Spring fastening spikes are driven through holes in the sleeper plate into the timber sleeper. As the spike penetrates the timber the points of the spike separate and anchor the spike into the sleeper.

3.2 Action The spike resists withdrawal and shear forces and is subject to fatigue and corrosion.