Australian Standard™

Railway track material

Part 3: Sleeper plates

Standards Australia

This Australian Standard was prepared by Committee CE-002, Railway Track Materials. It was approved on behalf of the Council of Standards Australia on 14 June 2002 and published on 1 August 2002.

The following are represented on Committee CE-002:

Australasian Railways Association

Australian Chamber of Commerce and Industry

Australian Industry Group

Bureau of Steel Manufacturers of Australia

Rail Track Association of Australia

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 02104.

Australian Standard™

Railway track material

Part 3: Sleeper plates

Originated as part of AS E1a—1926T, AS 1085.9—1979 and AS 1085.16—1995.
Previous edition AS 1085.3—2000.
Third edition 2002.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 4617 9

PREFACE

This Standard was prepared by the Standards Australia Committee CE-002, Railway Track Materials, to supersede AS 1085.3—2000, *Railway permanent way material*, Part 3: *Sleeper plates*.

The objective of this Standard is to provide manufacturers and purchasers with materials, dimensions and performance requirements for rolled or cast sleeper plates of clip-fastening and double shoulder type intended for use with timber sleepers in railway track.

Changes to the previous edition are as follows:

(a) Change of title of the AS 1085 series (previously *Railway permanent way material*).

(b) The referenced documents list has been revised.

(c) The most recent version of the informative Appendix 'Means of demonstrating compliance with this Standard' has been included.

This Standard covers cast iron sleeper plates and alloyed carbon steel sleeper plates within the limits for chemical composition. In the area of unalloyed carbon steel base plates it is based on ISO 6305-2—1983, *Railway components—Technical delivery requirements*, Part 2*: Unalloyed carbon steel baseplates*, but differs from it as follows:

(i) This Standard contains no requirements covering working gauges, acceptance conditions or statistical quality level criteria for product.

(ii) Materials for rolling are specified by chemical analysis.

(iii) Tolerances are specified for more dimensions and are in some cases different.

(iv) A bend test has been included.

(v) Marking includes more detail.

An Appendix includes full development profiles and section properties for sleeper plates.

The Standard now requires that the datum side of rolled steel sleeper plates be clearly marked and the chemical composition has been brought in line with other recently published steel Standards.

This Standard does not preclude the adoption, by agreement between the purchaser and the manufacturer, of requirements other than those specified herein. The drawings in the Appendices show typical hole positions only; alternative arrangements may be negotiated with respect to hole configurations, dimensions and tolerances.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

CONTENTS

Page

1 SCOPE 4
2 PURPOSE AND CONTEXT OF USE 4
3 REFERENCED DOCUMENTS 4
4 DEFINITIONS 5
5 ROUNDING OF NUMBERS 5
6 DESIGNATION 6
7 DIMENSIONS AND TOLERANCES 6
8 MATERIALS 7
9 HOLES 8
10 FINISH 8
11 TESTING 8
12 MARKING 9

APPENDICES
A INFORMATION TO BE SUPPLIED BY THE PURCHASER 10
B MEANS OF DEMONSTRATING COMPLIANCE WITH THIS STANDARD 11
C CAST SLEEPER PLATE PROFILES AND SECTION PROPERTIES 13
D ROLLED STEEL SLEEPER PLATE PROFILES AND SECTION PROPERTIES 24
E BEND TEST FOR ROLLED STEEL SLEEPER PLATES 32

STANDARDS AUSTRALIA

Australian Standard
Railway track material

Part 3: Sleeper plates

1 SCOPE

This Standard specifies requirements for double-shoulder and clip-fastening sleeper plates manufactured from rolled steel or from spheroidal graphite cast iron (cast sleeper plates) for use in conjunction with steel rails rolled in accordance with AS 1085.1.

NOTES:

1 The sleeper plates may also be used for rail sizes not currently covered in AS 1085.1.

2 See Appendix A for a list of the information that should be supplied by the purchaser when enquiring about or ordering sleeper plates to this Standard.

3 See Appendix B for means of demonstrating compliance with this Standard.

2 PURPOSE AND CONTEXT OF USE

2.1 Function

Sleeper plates are intended to act as part of a restraining assembly to hold steel rails to timber sleepers in railway track. Sleeper plates usually have two vertical surfaces (shoulders) that bear against the edges of the rail foot, holes to allow for securing the plate to the sleeper using spikes, screws or bolts and means for securing the rail in place on the plate using a clip or dog spike.

2.2 Action

Sleeper plates transfer loads from the rail to the sleeper both laterally and horizontally. Loads arise from thermal effects, passage of rolling stock at speed and maintenance. The shoulders ensure that the rail remains square to the sleeper in the horizontal plane.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1085	Railway track material
1085.1	Part 1: Steel rails
1100	Technical drawing
1100.101	Part 101: General principles
1199	Sampling procedures and tables for inspection by attributes
1199	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
1831	Ductile cast iron
2706	Numerical values—Rounding and interpretation of limiting values
3978	Non-destructive testing—Visual inspection of metal products and components