

Australian Standard 1085, Part 9—1983

**RAILWAY PERMANENT WAY
MATERIAL**

**Part 9—ROLLED STEEL CLIP
FASTENING SLEEPER
PLATES**



STANDARDS ASSOCIATION OF AUSTRALIA
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Bureau of Steel Manufacturers of Australia
Confederation of Australian Industry
Railways of Australia Committee
SAA Committee on Threaded Fasteners

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AUSTRALIAN STANDARD

**RAILWAY PERMANENT
WAY MATERIAL**
Part 9
**ROLLED STEEL CLIP
FASTENING SLEEPER PLATES**

AS 1085, Part 9—1983

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PREFACE

This edition of this standard was prepared by the Association's Committee on Railway Permanent Way Materials to supersede AS 1085, Part 9—1979.

This edition of the standard is technically identical with the 1979 edition apart from several minor alterations to the dimensions of sections shown in Figs A1 and A3, and the rounding-off of 'soft' metricated dimensions in the section shown in Fig A2 in order to make this section consistent with the sections in Figs A1 and A3 which are designed and rolled in metric dimensions.

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 Appendix A show typical punchings only; alternative punchings may be negotiated with respect to hole configurations, dimensions and tolerances.

CONTENTS

	<i>Page</i>
SPECIFICATION	
1 Scope	3
2 Referenced Documents	3
3 Designation	3
4 Steelmaking Process	3
5 Rolled-in Brands	3
6 Chemical Composition	3
7 Finish	3
8 Dimensions and Tolerances	3
9 Bend Test	4
10 Retests	4
11 Rounding of Numbers	4
APPENDICES	
A Sleeper Plate Profiles	5
B Bend Test Profiles	8
C Purchasing Requirements	9

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
Railway Permanent Way Material

PART 9—ROLLED STEEL CLIP FASTENING SLEEPER PLATES

1 SCOPE. This standard applies to clip fastening rolled steel sleeper plates for use in conjunction with steel rails rolled in accordance with AS 1085, Part 1.

NOTES:

1. The sleeper plates may also be used for rail sizes not currently covered in Part 1.
2. It is essential that the purchaser supply the manufacturer with certain information when enquiring about or ordering sleeper plates to this standard. Purchasing guidelines are given in Appendix C.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1050	Methods for the Analysis of Iron and Steel (Metric Units)
AS 1085	Railway Permanent Way Material Part 1—Steel Rails
AS 1100	Drawing Practice Part 10—Geometry Tolerancing
AS 1213	Methods for the Sampling of Iron, Steel, Permanent Magnet Alloys and Ferro-alloys
AS 1442	Carbon Steels and Carbon-manganese Steels—Hot-rolled Bars and Semi-finished Products
AS K1	Methods for the Sampling and Analysis of Iron and Steel

3 DESIGNATION. The sleeper plates shall be designated by the fastening system and type of rail seating, i.e. whether taper or level base, the number of this Australian standard, and the nominal rail base width, e.g.—

Clip fastening taper base sleeper plate to AS 1085, Part 9 for 146 mm rail base.

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

5 ROLLED-IN BRANDS. The sleeper plates shall be distinctly branded with figures denoting the nominal base width of the rails with which the sleeper plates are intended to be used and a mark to signify the manufacturer, e.g. 146 XXX.

Letters and figures shall be rolled on the outside of the shoulder on the datum side of the sleeper plates, and shall be raised not less than 0.5 mm from the surface. A portion of the markings shall appear on each finished sleeper plate.

6 CHEMICAL COMPOSITION.

6.1 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, atomic absorption spectroscopy, combustion techniques or classical volumetric and gravimetric methods.

6.2 Cast Analysis. The reported cast analysis shall comply with the limits set out in Table 1.

TABLE 1
CHEMICAL COMPOSITION
(CAST ANALYSIS)

percent				
Carbon	Silicon	Manganese	Phosphorus	Sulphur
0.15 to 0.30	0.35 max.	0.40 to 0.80	0.050 max.	0.050 max.

6.3 Product Analysis. The permitted variation on product analysis shall comply with the limits given in Table 8 of AS 1442.

7 FINISH. The sleeper plates shall be free from injurious warp, harmful burrs and other defects detrimental to their subsequent use. However, localized areas of deformation caused by shearing and punching shall be permitted.

8 DIMENSIONS AND TOLERANCES. Dimensions and shapes shall conform to the appropriate profiles in Appendix A, subject to the tolerances prescribed in Table 2.

NOTE: This requirement does not preclude the negotiation between the purchaser and the manufacturer of dimensions and tolerances of holes and hole centres other than those specified herein.

TABLE 2
DIMENSIONAL TOLERANCES

Description	Tolerance mm
Rail seat width	± 1.0
Rail seat flatness (Notes 1 and 2)	1.0 max.
Thickness	± 1.0
Rolled width	± 5.0
Sheared length	± 5.0
Size of hole	± 0.6
Position of holes	± 0.8
Shearing out-of-squares	6.0 max.
Other dimensions (unless otherwise specified)	± 1.0
Local areas of deformation	0.5 max.

NOTES:

1. Tolerance applies as maximum value, except for local areas of deformation caused by shearing.
2. For interpretation, refer to AS 1100, Part 10.