AS 1085, Part 2—1979
UDC 625.143

Australian Standard 1085, Part 2—1979

1986 ed.

Comp

RAILWAY PERMANENT WAY MATERIAL

Part 2—FISHPLATES

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

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THE FOLLOWING INDUSTRIAL AND GOVERNMENTAL ORGANIZATIONS and SAA technical committee were officially represented on the committee entrusted with the preparation of this standard:

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

Railways of Australia Committee

SAA Committee on Threaded Fasteners

This standard, prepared by Committee CE/2, Railway Permanent Way Materials, was approved on behalf of the Council of the Standards Association of Australia on 9 October 1979, and was published on 1 December 1979.

1085 Railway permanent way material A4
Part 2—1986 Fishplates 8pp C

Specifies dimensions, properties and materials for bar-type fishplates for use with steel rails rolled in accordance with AS 1085.1. Full development profiles and purchasing requirements are included.

Committee CE/2. Supersedes AS 1085.2—1979. Publication date 1986-05-05. ISBN 0 7262 4130 X.

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CORRIGENDUM
to
AS 1085, Part 2—1979
RAILWAY PERMANENT WAY MATERIAL
PART 2—FISHPLATES

SUMMARY: This correction slip applies to Fig. A4.

Published on 1 June 1980.

Page 8. Fig. A4.

Delete 'Area 2986 mm^2' and *substitute* 'Area 2968 mm^2.'

March 1980

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CORRIGENDUM
to
AS 1085, Part 2—1979
RAILWAY PERMANENT WAY MATERIAL
PART 2—FISHPLATES

SUMMARY: This correction slip applies to Fig. A5.

Published on 1 April 1980.

Page 9. Fig. A5, Development of Fishplate.

Delete dimension '37.5' from centreline of bolt holes to underside of lip and *substitute* '27.5'.

AUSTRALIAN STANDARD

RAILWAY PERMANENT WAY MATERIAL

Part 2 FISHPLATES

AS 1085, Part 2—1979

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PREFACE

This revised edition of Part 2 of AS 1085 was prepared by the Association's Committee on Railway Permanent Way Materials.

Appendix A now includes full development profiles and section properties of five sizes of fishplates, for use in conjunction with steel rails rolled in accordance with AS 1085, Part 1—Steel Rails. The chemical composition is now in line with other recently published steel standards, and the mass per pair of fishplates has been updated.

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.

This standard may require reference to the following standards:

AS 1050	Methods for the Analysis of Iron and Steel (Metric Units)
AS 1085	Railway Permanent Way Material Part 1—Steel Rails
AS 1213	Methods for the Sampling of Iron, Steel, Permanent Magnet Alloys and Ferro-alloys
AS 1391	Methods for Tensile Testing of Metals
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

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
RAILWAY PERMANENT WAY MATERIAL

PART 2—FISHPLATES

1 SCOPE. This standard applies to bar-type steel fishplates for use in conjunction with steel rails rolled in accordance with AS 1085, Part 1.

NOTE: It is essential that the purchaser supply the manufacturer with certain information when enquiring about or ordering fishplates to this standard. Purchasing guidelines are given in Appendix B.

2 DESIGNATION. Fishplates shall be designated by the number of this Australian standard and the nominal rail size, e.g.—

Fishplate to AS 1085, Part 2 for 53 kg rail.

3 STEELMAKING PROCESS. The steel used for the manufacture of the fishplates 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 ROLLED-IN BRANDS. Each fishplate shall be distinctly branded with figures denoting the mass per metre of rails for which the fishplates are intended, a mark to identify the manufacturer and the year in which they were rolled, e.g. 53 XXX 79.

The letters and figures shall be rolled on the outside surface of the fishplate, and shall be raised not less than 0.5 mm from the plane surface of the fishplate.

5 CHEMICAL COMPOSITION.

5.1 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.

5.2 Ladle Analysis. The reported analysis shall comply with the limits set out in Table 1.

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

TABLE 1
CHEMICAL COMPOSITION (LADLE ANALYSIS)

percent

Carbon	Silicon	Manganese	Phosphorus	Sulphur
0.35-0.55	0.35 max.	0.55-1.00	0.05 max.	0.05 max.

6 HOLES FOR FISHBOLTS. The holes for fishbolts shall be either drilled or punched, and shall be to the centres and dimensions shown in the appropriate drawings in Appendix A, subject to the tolerances given in Table 2.

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

7 FINISH. Fishplates shall be free from defects detrimental to their end use, but localized areas of deformation caused by shearing or punching and conforming to the tolerance limits given in Table 2 shall be permitted.

8 TOLERANCES ON SECTION AND DIMENSIONS.

8.1 Section. The section shall conform to the appropriate profile in Appendix A. A variation of 2.0 mm horizontally outwards shall be permitted, i.e. if a fishplate template is placed on the rolled bar, it shall not vary horizontally outwards by more than 2.0 mm from the nominal position.

8.2 Dimensions. Fishplates shall conform to the dimensions indicated for the appropriate profile given in Appendix A, subject to the tolerances given in Table 2.

TABLE 2
DIMENSIONAL TOLERANCES

millimetres

Dimension		Tolerance	
Length		± 3	
Thickness		± 0.5	
Size of hole		± 1.0	
Position of holes		± 1.0	
Localized areas of deformation		0.5 max.	
All other dimensions		± 1	
Camber		Fishplates ≤ 650 long	Fishplates >650 long
	Centre upwards	1.0	2.0
	Centre downwards	1.0	2.0
	Centre outwards from rail	1.0	2.0
	Centre inwards from rail	1.0	2.0