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Australian Standard 1085, Part 10—1980

Amend. 1.

RAILWAY PERMANENT WAY MATERIAL

Part 10—RAIL ANCHORS

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

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 10 October 1980, and was published on 1 December 1980.

AS 1085.10—1995
Rail anchors 6pp C
Specifies the requirements for one-piece rail anchors for application to steel rails rolled in accordance with AS 1085.1.
(CE/2): Supersedes AS 1085.10—1980: Publication date 1995-05-05.

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AMENDMENT No 1
to
AS 1085.10—1980
RAILWAY PERMANENT WAY MATERIAL
PART 10—RAIL ANCHORS

REVISED TEXT

SUMMARY: This amendment applies to Clauses 2, 3 and 5.

Published on 6 January 1986.

AMDT No 1 JAN. 1986

Page 3. Clause 2.

Delete existing clause and Note, and *substitute*:

2 DESIGNATION. Anchors shall be designated according to the nominal rail size and description with which they are intended to be used.

AMDT No 1 JAN 1986

Page 3. Clause 3 (new)

Insert new Clause 3 and *renumber* existing Clauses 3 to 7 as 4 to 8.

3 BEARING AREA. The shape and size of the rail anchor shall be such that the following minimum bearing areas are projected to the sleeper face.

TABLE 1

Rail foot dimension	Area projected to sleeper—Australian Standard Taper base sleeper plates used
146 mm	3 200 mm^2
127 mm	3 000 mm^2
108 mm	2 500 mm^2

AMDT No 1 JAN 1986

Page 3. Clause 5. (renumbered Clause 6).

Add the following paragraphs:

The shape of the heel, or jaw, of the anchor shall be such that during application no sharp facing edge is presented to the top of the foot of the rail.

The anchor shall be provided with a nib to lock the anchor over the foot of the rail, on the opposite side from the heel.

AUSTRALIAN STANDARD

RAILWAY PERMANENT WAY MATERIAL

Part 10 RAIL ANCHORS

AS 1085, Part 10—1980

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PREFACE

This standard was prepared by the Association's Committee on Railway Permanent Way Materials to supersede the 1979 edition.

In this edition, the material from which the anchors are made has been changed to reflect current practice, and the performance test has been modified. The test now includes a minimum rate of application of the rail anchor to the rail, and the dislodging force is applied through a former.

The standard is intended not only to provide tests for standard performance requirements which manufacturers' products must satisfy, but also to permit flexibility in both product design and material.

This standard may require reference to the following standard:

AS 1085 Railway Permanent Way Material
Part 1—Steel Rails

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
RAILWAY PERMANENT WAY MATERIAL

PART 10—RAIL ANCHORS

1 SCOPE. This standard sets out manufacturing and performance requirements for one-piece rail anchors for application to steel rails rolled in accordance with AS 1085, Part 1. Dimensions and tolerances are not specified.

NOTES:

1. The performance requirements may also be relevant for rail sizes not currently covered by this standard.
2. Dimensional tolerances should be agreed between the purchaser and the manufacturer.
3. It is essential that the purchaser supply the manufacturer with certain information when enquiring about or ordering rail anchors to this standard. Purchasing guidelines are given in Appendix A.

New Clause 2 see Amend. 1.

2 DESIGNATION. Anchors shall be designated according to the method of bearing, i.e.—

(a) bearing solely against the sleeper; or

(b) bearing against the sleeper and sleeper plate;

and the nominal rail size with which they are intended to be used.

NOTE: The method of bearing is to be specified by the purchaser at the time of placing the order (see Appendix A, Paragraph A2(e)).

New Clause 3 See Amend. 1.

4 **MATERIAL.** Anchors shall be made from a suitable steel, heat treated to comply with the requirements specified in this standard.

5 **BRANDING.** Each anchor shall be distinctly branded with the nominal rail size with which it is to be used. The branding shall be on an external face, located so as not to induce fracture or in any way impair the strength of the anchor.

NOTE: It is recommended that numerals 10 mm high be punched into the surface.

6 **FINISH.** Anchors shall be of uniform size and free from roughness, burrs, notches, seams and other defects detrimental to their subsequent end use.

Additional paragraph. See Amend. 1.

7 **TESTS.**

6.1 Performance.

6.1.1 *Rail.* The rail used in the performance test shall be of nominal size as specified in AS 1085, Part 1. The rail shall be dry and free of grease or oil or any foreign matter.

6.1.2 *Rail anchor.* The anchor used in the performance test shall be dry and free of grease or oil or any foreign matter.

6.1.3 *Frequency of test.* A minimum of one rail anchor in each lot of 5000 shall be tested for performance.

6.1.4 *Test procedure.*

(a) The anchor shall be driven on to the rail using a force not exceeding 45 kN applied in a direction perpendicular to the length and parallel to the underside of the rail. This force shall be applied so that the anchor moves at a rate of not less than 8 mm/min.

(b) With the anchor normal to the rail, the anchor shall be subjected to a force of 22 kN applied parallel to the length of the rail. The force shall be transmitted through a former that bears uniformly on the total area of that part of the anchor face that is below the flange of the rail and normal to the rail.

(c) The anchor shall be removed from the rail and reapplied as in (a) above at least three times.

(d) The anchor shall be subjected to a force of 13 kN applied as in (b) above.

6.1.5 *Test requirement.* The rail anchor shall not slip on the rail.

6.2 Dimensional Tolerance. A minimum of four rail anchors in each lot of 1000 shall be tested for compliance with dimensional tolerances.

NOTE: The tolerances are a matter for agreement between the purchaser and the manufacturer.

6.3 Hardness.

6.3.1 *Number of tests.* A minimum of one rail anchor in each lot of 1000 shall be tested for hardness.

6.3.2 *Test requirement.* The hardness of the rail anchor shall be within the range 331 HB to 401 HB.

8 **RETESTS.** If the result of the performance test, dimensional tolerance test or hardness test does not comply with the specified requirements, double the number of specimens from the same batch shall be taken and subjected to the same test, and unless all of these meet the relevant requirements, the batch of rail anchors shall be deemed not to comply with the standard.