

AS 1085.14—1997

Australian Standard[®]

Railway permanent way material

**Part 14: Prestressed concrete
sleepers**

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 25 July 1997 and published on 5 October 1997.

The following interests are represented on Committee CE/2:

Australasian Railway Association
Bureau of Steel Manufacturers of Australia
Cement and Concrete Association of Australia
Rail Track Association Australia

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PREFACE

This Standard was prepared by the Standards Australia Committee CE/2, Railway Permanent Way Materials, to supersede AS 1085.14—1990.

The objective of this Standard is to provide designers, manufacturers and installers with requirements for prestressed concrete sleepers and their fastening components for railway systems.

This edition incorporates the following principal changes from the 1990 edition:

- (a) Cement now complies with AS 3972, *Portland and blended cements*.
- (b) The length of ballast support beneath each rail seat has been included in Table 4.1.
- (c) The Standard no longer gives the option for the designer to undertake a more thorough analysis of flexural stresses in the sleeper than provided by the simple bending theory in Clause 4.3.1.
- (d) A definition of the term 'gauge point' has been added.
- (e) For design purposes, the tensile strength (f_p) values for wire tendons and strand tendons have been included in Clause 4.5.2.
- (f) In Clause 6.2.3, the test tensile stress (f_t) is now related to characteristic compressive strength of the concrete f'_c at 28 days.
- (g) The fastening insert pull-out test cautions against confusing hairline cracks under the rail surface seat with cracks formed by the generation of the conical tensile failure of the fastener.
- (h) A new paragraph on test data for dynamic effects has been added to Paragraph F9, Appendix F.
- (i) In Paragraph J3(f), Appendix J, a range of 180 to 300 cycles per min is now specified.
- (j) In Paragraph N3, Appendix N, a new apparatus is included for conducting electrical impedance tests.

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.

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