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Australian Standard 1085, Part 4—1978

RAILWAY PERMANENT WAY MATERIAL PART 4—NON-HEAT- TREATED FISHBOLTS (INTERFERENCE FIT)

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

Associated Chambers of Manufactures of Australia
Bureau of Steel Manufacturers of Australia
Railways of Australia Committee

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 27 February 1978, and was published on 1 June 1978.

The specification is intended to include the technical provisions necessary for the supply of the materials herein referred to, but does not purport to comprise all the necessary provisions to a contract.

To keep abreast of progress in industry, Australian standards are regularly reviewed. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

AUSTRALIAN STANDARD SPECIFICATION

**RAILWAY PERMANENT
WAY MATERIAL
Part 4
NON-HEAT-TREATED
FISHBOLTS
(INTERFERENCE FIT)**

AS 1085, Part 4—1978

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PREFACE

This part of AS 1085 was prepared by the Association's Committee on Railway Permanent Way Materials, as the revision and metrication of AS E25—1964, Steel Fishbolts, which it accordingly supersedes.

This standard does not preclude the adoption, by agreement between the purchaser and the manufacturer, of requirements other than those specified herein.

This standard may require reference to the following standards:

- AS 1050 Methods for the Analysis of Iron and Steel (Metric Units)
- AS 1213 Methods for the Sampling of Iron, Steel, Permanent Magnet Alloys and Ferro-alloys
- AS 1275 Metric Screw Threads for Fasteners (based on ISO Recommendations)
- AS 1391 Methods for Tensile Testing of Metals
- AS 1442 Hot-rolled Carbon Steels and Carbon-Manganese Steels (Bars and Semi-finished Products) (Metric Units)
- AS K1 Methods for the Sampling and Analysis of Iron and Steel

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STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard Specification
for
RAILWAY PERMANENT WAY MATERIAL**

**PART 4—NON-HEAT-TREATED FISHBOLTS
(INTERFERENCE FIT)**

1 SCOPE. This specification applies to non-heat-treated fishbolts for use in conjunction with steel rails and fishplates rolled in accordance with AS 1085, Parts 1 and 2.*

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

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

3 CHEMICAL COMPOSITION.

3.1 Ladle Analysis. The manufacturer shall make a chemical analysis of the steel from each ladle to determine the proportion of the specified elements. This analysis shall be made of a sample taken during the pouring of the ladle, and shall comply with the limits set out in Table 1. The permitted variation on product analysis of fishbolts from the range specified shall not exceed that given in Table 8 of AS 1442.†

**TABLE 1
CHEMICAL COMPOSITION (LADLE ANALYSIS)**

percent		
Carbon	Phosphorus	Sulphur
0.5 max.	0.05 max.	0.05 max.

3.2 Accuracy. The methods of sampling for analysis and the methods of analysis shall be not less accurate than those prescribed in AS 1050‡, AS 1213§ and AS K1.||

*AS 1085, Railway Permanent Way Material, Part 1—Steel Rails; Part 2—Fishplates.

†AS 1442, Hot-rolled Carbon Steels and Carbon-Manganese Steels (Bars and Semi-finished Products) (Metric Units).

‡AS 1050, Methods for the Analysis of Iron and Steel (Metric Units).

§AS 1213, Methods for the Sampling of Iron, Steel, Permanent Magnet Alloys and Ferro-alloys.

||AS K1, Methods for the Sampling and Analysis of Iron and Steel.