

Australian Standard<sup>®</sup>

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**Linear measuring instruments used  
in construction**

**Part 7: Surveyor's measuring bands  
and readers**

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This Australian Standard was prepared by Committee BD/3, Linear Measuring Instruments. It was approved on behalf of the Council of Standards Australia on 28 June 1995 and published on 5 October 1995.

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The following interests are represented on Committee BD/3:

Association of Consulting Surveyors of New South Wales  
CSIRO, Division of Applied Physics  
Hardware Federation of Australia  
Inter-Governmental Committee on Survey and Mapping  
Metal Trades Industry Association of Australia  
Queensland Department of Transport

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## PREFACE

This Standard was prepared by the Standards Australia Committee on Linear Measuring Instruments to supersede AS 1297—1980, *Surveyor's measuring bands*.

During the preparation of this Standard consideration was given to the following:

BS

3693 Recommendations for design of scale and indexes on analogue indicating instruments

4484 Specification for measuring instruments for constructional works

4484.1 Part 1: Metric graduation and figuring of instruments for linear measurement

The assistance gained from these documents is acknowledged.

This edition has been redesignated as Part 7 of the series of Standards dealing with linear measuring instruments and incorporates a number of editorial changes to conform with the Standards Australia editorial style. Apart from those incorporated in AS 1290, *Linear measuring instruments used in construction*, Part 1: *General requirements*, there are no significant technical changes in this edition.

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Previous edition 1980.  
Revised and redesignated AS 1290.7 — 1995.

## STANDARDS AUSTRALIA

## Australian Standard

## Linear measuring instruments used in construction

## Part 7: Surveyor's measuring bands and readers

**1 SCOPE** This Standard specifies the requirements for surveyor's measuring bands 30 m to 100 m in length, and readers 2 m and 3 m in length.

**2 REFERENCED DOCUMENT** The following document is referred to in this Standard:

AS

1290 Linear measuring instruments used in construction

1290.1 Part 1: General requirements

**3 DEFINITIONS** For the purpose of this Standard, the definitions given in AS 1290.1 apply.

**4 GENERAL REQUIREMENTS** Surveyor's measuring bands and readers shall comply with the general requirements given in AS 1290.1 where applicable.

**5 MEASURING BAND COMPONENTS****5.1 Ribbon**

**5.1.1 Bands other than low expansion alloy bands** The ribbon of a band other than a low expansion alloy band shall comply with the following requirements:

- (a) The ribbon shall be manufactured in one continuous length of carbon steel or stainless steel with an ultimate tensile strength of not less than 1450 MPa.
- (b) The width of the ribbon shall be  $1.6 \pm 0.1$  mm,  $2.1 \pm 0.1$  mm or  $3.2 \pm 0.1$  mm.
- (c) The thickness of the ribbon shall be to  $0.5 \pm 0.05$  mm.
- (d) The error in edge straightness of the ribbon shall be not greater than the values given in Table 1.

**5.1.2 Low expansion alloy bands** The ribbon of a low expansion alloy band shall comply with the following requirements:

- (a) The ribbon shall be manufactured in one continuous length from a low thermal expansion nickel-iron alloy such as invar and heat-treated to achieve dimensional stability and an ultimate tensile strength of not less than 450 MPa.
- (b) The width of the ribbon shall be  $3.2 \pm 0.1$  mm.
- (c) The thickness of the ribbon shall be  $0.5 \pm 0.05$  mm.

**5.2 Ends of band** The ends of the band shall comply with the following requirements:

- (a) Each end of the ribbon shall terminate with a metal eye which shall be formed either from the ribbon, reinforced and secured, or fabricated separately and attached to the ribbon.

Rivets may be used to secure to eyes to a 3.2 mm ribbon only.

The width of the eyes shall be not greater than the width of the ribbon.