Australian Standard®

Linear measuring instruments used in construction

Part 7: Surveyor's measuring bands and readers

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.

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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Originated as AS 1297—1972.
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 ±0.1 mm, 2.1 ±0.1 mm or 3.2 ±0.1 mm.

(c) The thickness of the ribbon shall be to 0.5 ±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 ±0.1 mm.

(c) The thickness of the ribbon shall be 0.5 ±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.