AS 4076.1—1992
ISO 1120:1984

Australian Standard®

Conveyor belts—Determination of strength of mechanical fastenings

Part 1: Static test method

This Australian Standard was prepared by Committee RU/2, Conveyor and Elevator Belting. It was approved on behalf of the Council of Standards Australia on 8 September 1992 and published on 14 December 1992.

The following interests are represented on Committee RU/2:

Australian Chamber of Commerce and Industry

Australian Coal Association

Australasian Institute of Mining and Metallurgy

Bureau of Steel Manufactures of Australia

Department of Mineral Resources, N.S.W

Electricity Supply Association of Australia

Institute of Quarrying (West Australian Branch)

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PREFACE

This Standard was prepared by the Standards Australia Committee on Conveyor and Elevator Belting under the direction of the Multitechnics Standards Policy Board. It is identical with and has been reproduced from ISO 1120:1984, *Conveyor belts—Determination of strength of mechanical fastenings,* Part 1: *Static test method.*

For the purposes of this Australian Standard, the ISO text should be modified as follows:

(a) *Terminology* The words 'Australian Standard' should replace the words 'International Standard' wherever they appear.

(b) *References* Replace references to other publications by references to Australian Standards as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
283	Full thickness tensile strength and elongation of conveyor belts—Specifications and methods of test	1334	Methods of testing conveyor and elevator belting
		1334.3	Part 3: Determination of full thickness tensile strength and elongation of conveyor belting

(c) *Other modifications* The following amendments should be made to the ISO text:

(i) The second paragraph in Clauses 6.1.1 and 6.1.2 should be deleted.

(ii) A Note should be added to Clause 6.3 as follows:

'The humidity requirement may be waived when it is known that the belting type is not sensitive to humidity or moisture'.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 1120 was prepared by Technical Committee ISO/TC 41 *Pulleys and belts (including veebelts).*

ISO 1120 was first published in 1976. This second edition cancels and replaces the first edition, clauses 6.3 and 7 of which have been revised technically.

Conveyor belts—Determination of strength of mechanical fastenings

Part 1:
Static test method

1 Scope and field of application

This International Standard specifies a static test method for measuring the strength of a conveyor belt mechanical fastening; the joints can be of either the permanent type or capable of disconnection.

This International Standard does not cover vulcanized joints.

Note — The purpose of the test specified in this International Standard is to eliminate mechanical fastenings of insufficient static strength. A dynamic test is to be established at a later date.

2 Reference

ISO 283, *Full thickness tensile strength and elongation of conveyor belts — Specifications and method of test.*

3 Definitions

3.1 width of fastening: Number of units multiplied by the pitch, or number of hooks multiplied by the pitch.

3.2 pitch: Distance between a point on a unit or hook and the corresponding point on the next unit or hook, according to the type of fastening (see figure 1).

4 Principle

Application of an increasing tensile force on a test piece until the joint made by the mechanical fastening breaks and comes apart.

5 Apparatus

5.1 Metallic adaptor plate, for joints that can be disconnected.

5.2 Dynamometer, as described in ISO 283.

6 Test pieces

6.1 Shape, dimensions and preparation

6.1.1 Joints that can be disconnected

The test piece shall consist of a full thickness piece of belting cut in the longitudinal direction, with a length of 150 mm plus the gripped length, and 150 mm wide. It shall be connected to the connecting plate by the mechanical fastening to be used; the fastened width shall be at least 100 mm.

When the overall fastened width in service is equal to the belt width, the width of the test piece may be considered equal to the overall fastened width, but shall be not less than 100 mm.

6.1.2 Joints that cannot be disconnected

The test piece shall consist of two lengths of belting each of minimum length of 150 mm plus the gripped length, and 150 mm wide, assembled by means of the mechanical fastening to be used.

When the overall fastened width in service is equal to the belt width, the width of the test piece may be considered equal to the overall fastened width, but shall be not less than 100 mm.

6.2 Number

Three test pieces shall be tested.

6.3 Conditioning

The test shall be carried out on pieces of belt cut at least 5 days after manufacture (including the conditioning period).

The test piece shall be conditioned for 3 days at a temperature of 23 ± 2 °C and a relative humidity of 50 ± 5 %. In the event of dispute, the period of conditioning shall be extended to 14 days.