AS 1891.5:2020

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Personal equipment for work at height

Part 5: Manufacturing requirements for lanyard assemblies and pole straps

AS 1891.5:2020

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The following are represented on Committee SF-015:

Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Lightweight Vertical Rescue Instructors
Australian Mobile Telecommunications Association
Australian Rope Access Association
Better Regulation Division
Communications, Electrical and Plumbing Union — Electrical Division
Engineers Australia
Facility Management Association of Australia
IRATA Australia
Petroleum and Gas Inspectorate
Roofing Industry Association of NSW
Transport for NSW
Working at Height Association

Additional Interests

Business New Zealand
Electricity Engineers' Association, New Zealand
IANZ
Industrial Rope Access Association of New Zealand
New Zealand Arboricultural Association
WorkSafe New Zealand

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Personal equipment for work at height

Part 5: Manufacturing requirements for lanyard assemblies and pole straps

Originated as part of AS 1891—1976.
Previous edition part of AS/NZS 1891.1:2007.
Revised in part and redesignated as AS 1891.5:2020.

Preface

This Standard was prepared by the Australian members of joint Standards Australia/Standards New Zealand SF-015, Industrial Height Safety Equipment, to supersede in part AS/NZS 1891.1:2007, *Industrial fall-arrest systems and devices, Part 1: Harnesses and ancillary equipment*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify requirements for the materials, design, manufacture, testing and labelling of lanyard assemblies and pole straps.

The major changes in this edition are as follows:

(a) Separation of the document (AS/NZS 1891.1:2007) into three separate documents dealing with the following areas:

  (i) Harness manufacture (AS/NZS 1891.1).

  (ii) Lanyard and pole strap manufacture (this Standard).

(b) Alteration of the testing requirements to align with International standards and foreseeable use while balancing the need to maintain appropriate safety margins in design. These changes include:

  (i) Elimination of unnecessary product testing through inclusion of a deemed to satisfy process.

  (ii) Introduction of testing and labelling of lanyards for a range of user mass.

  (iii) Increased requirements for testing of adjuster creep.

  (iv) A requirement to test each product dynamically and then statically.

  (v) A reduction of test loads to reflect this new testing process.

  (vi) The introduction of minimum requirements for both connector gate loading strength and major axis strength.

  (vii) Removal of the usage of natural fibre ropes.

This document is the fifth part of the following series of Standards dealing with this area of industrial safety:

AS 1891.5, *Personal equipment for work at height, Part 5: Manufacturing requirements for lanyard assemblies and pole straps* (this Standard)

AS/NZS 1891.1, *Personal equipment for work at height, Part 1: Manufacturing requirements for full body, combination and lower body harnesses*

AS/NZS 1891.2, *Industrial fall-arrest systems and devices, Part 2: Horizontal lifeline and rail systems*

AS/NZS 1891.2, Supp 1, *Industrial fall-arrest systems and devices, Part 2: Horizontal lifeline and rail systems, Supplement 1: Prescribed configurations for horizontal lifelines (Supplement to AS/NZS 1891.2—2001)*

AS/NZS 1891.3, *Personal equipment for work at height, Part 3: Manufacturing requirements for fall-arrest devices*

AS/NZS 1891.4, *Industrial fall-arrest systems and devices, Part 4: Selection, use and maintenance*

The above series of Standards are part of a suite which also includes the following:

AS/NZS 4488.1, *Industrial rope access systems, Part 1: Specifications*

AS/NZS ISO 22846.1, *Personal equipment for protection against falls — Rope access systems — Part 1: Fundamental principles for a system of work*

AS/NZS ISO 22846.2, *Personal equipment for protection against falls — Rope access systems — Part 2: Code of practice*

AS/NZS 5532, *Manufacturing requirements for single-point anchor device used for harness-based work at heights*

The terms "normative" and "informative" are used in Standards to define the application of the appendices to which they apply. A "normative" appendix is an integral part of a Standard, whereas an "informative" appendix is only for information and guidance.

Contents

Introduction

The ability of the human body to survive a fall with the minimum chance of serious injury will depend principally on the decelerating forces imposed on the body during fall-arrest and the manner in which those forces are transmitted to the body.

It has been recognized in the preparation of this Standard that equipment used to arrest a free-fall needs to be designed so that —

(a) forces developed in the supporting lanyard assembly during the fall-arrest do not exceed 6 kN; and

(b) product has to cater for user mass diversity.

Australian Standard®

Personal equipment for work at height

Part 5: Manufacturing requirements for lanyard assemblies and pole straps

Section 1 Scope and general

1.1 Scope

This Standard specifies requirements for the materials, design, manufacture, testing and labelling of lanyard assemblies and pole straps for work at height.

1.2 Exclusions

Self-retracting lanyards and guided type fall arrestors are not covered by this Standard. (Refer to AS/NZS 1891.3.)

Personal protective equipment designed exclusively for the following purposes is not covered by this Standard:

(a) Theatrical flying.

(b) Rescue operations.

(c) Emergency services.

(d) Recreational activities.

NOTE Equipment conforming to this Standard may be appropriate for these purposes.

1.3 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 2001.4.A02, *Methods of test for textiles, Method 4.A02: Colourfastness tests — Grey scale for assessing change in colour*

AS 2001.4.B01, *Methods of test for textiles, Method 4.B01: Colourfastness test — Determination of colourfastness to daylight of textile materials*

AS 2001.4.B02, *Methods of test for textiles, Method 4.B02: Colourfastness test — Colourfastness to artificial light: Xenon arc fading lamp test (ISO 105-B02:1994, MOD)*

AS 2001.4.21, *Methods of test for textiles, Method 4.21: Colourfastness test — Determination of colourfastness to light using an artificial light source (mercury vapour, tungsten filament, internally phosphor-coated lamp)*

AS 2193, *Calibration and classification of force-measuring systems*

AS 2321, *Short-link chain for lifting purposes*

AS 3569, *Steel wire ropes—Product specification*

AS 4142.2, *Fibre ropes, Part 2: Three-strand hawser-laid and eight-strand plaited*

AS 4142.3, *Fibre ropes, Part 3: Man-made fibre rope for static life rescue lines*