

Test Report

Personal fall protection equipment EN 354 : 2010 Lanyards

Report no: 2.17.07.17

Client: INSPEC Certification Services
56 Leslie Hough Way
Salford
Greater Manchester
M6 6AJ
United Kingdom

On behalf of: Jinhua Jech Tools Co., Ltd

Client orders and dates received: TA17/0032 (31 May 2017)
TA17/0032A (2 June 2017)
TA17/0032B (3 July 2017)

Model: JE3007B/2

Dates of test: 8 June 2017 to 19 July 2017

Signed:



Steven Sum, Laboratory Manager

Issued: 28 July 2017

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Conditions

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Specimens will be disposed of four weeks from the date of this report, unless otherwise instructed.

Opinions, comments and interpretations expressed in this report are shown in italics.

Copies of INSPEC interpretations referenced in this report are available upon request.

Tests marked are not included in our ANAB Scope of Accreditation.

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Summary of assessment*

Clause	Requirement	Assessment (See Key)
4.1	Design & ergonomics	Pass
4.2	Materials	Ltd
4.3	Terminations	Pass
4.4	Slippage - adjustable length lanyards	Pass
4.5	Static strength	Pass
4.6	Dynamic strength - adjustable length lanyards	Pass
	Static strength after dynamic strength - adjustable length lanyards	Pass
4.7	Corrosion resistance	Pass
4.8	Marking and information	
6	Marking	
7	Information supplied by the manufacturer	
8	Packaging	

⊕ *INSPEC Interpretation applies*

Key

	Shading shows the clauses requested. Any other clauses were not requested.
Pass	Requirement satisfied.
Ltd	Testing requested was insufficient completely to verify compliance with the clause. Refer to the "Result details" section for more information.
Fail	Requirement not satisfied. Refer to the "Result details" section for more information.
NAs	Assessment not carried out.
NAp	Requirement not applicable.
NT	Requested but not tested due to early termination following failure.

* Assessment relates only to those specimens which were tested and are the subject of this report.

Submission details

Product	Quantity	Date received	INSPEC specimen no. (2E116+)
Adjustable length lanyard, model JE3007B/2	09	19 May 2017	01 to 09

Procedures

The specimens detailed within the submissions above were used for the tests covered by this report.

Testing was performed in accordance with EN 354:2010 unless otherwise specified below. Reference should be made to the standard when reading this report.

Unless stated otherwise, specimens were tested in the condition as received by INSPEC.

Testing was performed at INSPEC's laboratory in Kunshan, China.

Result details**4.1 Design and ergonomics**

Specimen 2E11601 was assessed.

4.1.1 The materials of construction were smoothly finished and did not have sharp edges or burrs that may cause injury or may cut, abrade or otherwise cause damage to the lanyard itself. Pass

4.1.2 *The specimen incorporated a length adjustment device.*

When checked in accordance with 5.3.3, the specimen was adjustable. Pass

4.1.3 The length adjustment device did not allow unintentional opening and did not allow unintentional change of effective lanyard length. Pass

4.1.4 The specimen was fitted with an end stop which prevented unintentional detachment of the length adjustment device from the lanyard. Pass

4.1.5 There were no connectors incorporated into the lanyard. NAp

4.1.6 The maximum claimed length of the adjustable lanyard, by the manufacturer, was between 1.635 m.

The length of the specimen, measured to the nearest 5 mm between load bearing points, when adjusted to its maximum, was 1.64 m. This is within 5% of the claimed length. Pass

4.2 Materials

Specimens 2E11604 to 2E11608 were assessed.

4.2.1 Possible effects of contact by materials of the lanyard with the skin of the user were not assessed. Manufacturer to certify. NAs

4.2.2 The materials used for fibre rope, webbing and threads and their characteristics were not assessed. Manufacturer to certify. NAs

As the lanyards passed clauses 4.4 / 4.5 / 4.6, the materials used in the specimen may be deemed to be suitable for their intended use. Pass

4.2.3 This clause is not applicable to the type of lanyard tested. NAp

4.2.4 This clause is not applicable to the type of lanyard tested. NAp

4.3 Terminations

Specimen 2E11601 was assessed.

- 4.3.1 The ends of the specimen were stitched eye terminations. Hence the lanyard can be connected to other personal fall protection equipment, either directly or by an appropriate connector. Pass
- 4.3.2 The lanyard did not incorporate spliced terminations, so this clause is not applicable. NAp
- 4.3.3 Threads used for sewing the lanyard were white colour. This contrasted with the yellow and black colours of the lanyard material. Pass
- 4.3.4 Knots were not used in the terminations, so this clause is not applicable. NAp
- 4.3.5 The stitched eye terminations (mentioned in 4.3.1) were secured by plastic sleeves to prevent them from unravelling. Pass
- 4.3.6 This clause is not applicable to the type of lanyard tested. NAp

4.4 Slippage – adjustable length lanyards

Specimen 2E11604 was assessed.

When tested in accordance with 5.6.3, after conditioning in accordance with 5.2.1, the slippage of the lanyard through the length adjustment device was 10 mm. This is less than the maximum 50 mm permitted. Pass

Specimen 2E11605 was assessed.

When tested in accordance with 5.6.4, after conditioning in accordance with 5.2.2, the slippage of the lanyard through the length adjustment device was 12 mm. This is less than the maximum 50 mm permitted. Pass

4.5 Static strength – single lanyard (adjustable length)

- 4.5.1 When tested in accordance with 5.7, (with the lanyard adjusted to its minimum length) specimen 2E11606 withstood the 22 kN force applied for 3 minutes without separating, tearing or rupturing. Pass
- When tested in accordance with 5.7, (with the lanyard adjusted to its maximum length) specimen 2E11607 withstood the 22 kN force applied for 3 minutes without separating, tearing or rupturing. Pass
- 4.5.2 This clause is not applicable to the type of lanyard tested. NAp

4.6 Dynamic strength – adjustable length lanyards

Specimen 2E11608 was assessed.

When tested in accordance with 5.7, the specimen withstood the drop test without releasing the mass and the mass was retained clear of the ground. Pass

When subsequently tested in accordance with 5.7.3, the specimen withstood 3 kN force applied for 3 minutes without separating, tearing or rupturing. Pass

4.7 Corrosion resistance

Specimen 2E11609 was assessed.

When tested in accordance with 5.9, metallic element incorporated into the specimen did not show evidence of corrosion of the base metal. Pass

Estimates of the uncertainty of measurement

Clause	Test	Uncertainty
4.1	Design & ergonomics	-
4.1.6	Materials and construction – length of lanyard	Length ± 3.1 mm
4.2	Materials	-
4.3	Terminations	-
4.3.4	Terminations – length of knot tail	Length ± 1.8 mm
4.4	Slippage	$\pm 1.0\%$
4.5	Static strength	*
4.6	Dynamic strength	*
4.7	Corrosion	*
4.8	Marking and information	-
6	Marking	-
7	Information	-
8	Packaging	-

* The acceptance criterion for this test is a straightforward "Pass/Fail", rather than a numerical value. Consequently, as there is no value to be reported, uncertainty has not been reported either.

Values expressed as a percentage (%) are relative.

It should be noted that the above values have not been taken into account when making assessment to the pass/fail criteria.

ANNEX

This Annex comprises one section.

1. Photograph of the product tested. (1 page)

**Jinhua Jech Tools Co., Ltd –
Adjustable length lanyard, model JE3007B/2**



INSPEC Testing Services' specimen 2E11601

8 June 2017