

## Test Report

### CSA Z259.10-2012 Full body harnesses

**Report no:** 2.18.05.25

**Client:** Jinhua Jech Tools Co., Ltd.  
No.1448 Tongxi Road, Linjiang Industrial Park  
Wucheng District  
Jinhua City  
Zhejiang 321025  
China

**Manufacturer:** Jinhua Jech Tools Co., Ltd

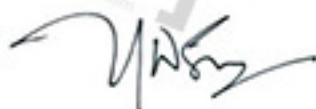
**Client order:** T/0463

**Date received:** 6 January 2018

**Model:** JE136103G

**Dates of tests:** 28 March 2018 to 31 May 2018

**Signed:**



Steven Sum, Laboratory Manager

**Issued:** 31 May 2018

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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	Fibre webbing <sup>①</sup>	Ltd
4.2	Connecting components	Pass
4.3	Keeper	Pass
4.4	Tongue type buckles	Pass
4.5	Fall arrest indicator	Pass
4.6	Avoidance of the genital area	Pass
4.7	Classification	Pass
4.8	Class A – Fall arrest	Pass
4.9	Class D – Suspension and controlled descent	
4.10	Class E – Limited access	
4.11	Class L – Ladder climbing	
4.12	Class P – Work positioning	Pass
4.13	Alternative applications	
4.14	Alternative materials & construction	
5.2.1	Drop test - class A, feet first	Pass
5.2.2	Drop test - class A, head first	Pass
5.2.3	Drop test – class P	Pass
5.3	Fall arrest indicator static test <sup>①</sup>	
	Fall arrest indicator dynamic test <sup>①</sup>	Pass
7.1	Markings	Ltd
7.2	Information	Pass

<sup>①</sup> 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	Dates received	INSPEC specimen no.
Webbing, yellow colour, part # 202	10 m	23 January 2018	2F02701A to 2F02701E
Webbing, black colour, part # 95	10 m		2F02702A to 2F02702E
Full body harness, model JE136103G	04	24 April 2018	2F05401 to 2F05404

**Procedures**

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

Testing was performed in accordance with CSA Z259.10-2012 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****4.1.1 Fibre webbing**

Not assessed. Manufacturer to certify.

NAs

**4.1.2 Stitching and cut ends**

Specimen 2F05401 was assessed.

- a) All machine stitching was not assessed. Manufacturer to certify.
- b) The ends of all threads were not assessed. Manufacturer to certify.
- c) All webbings were hot-cut finished to prevent fraying.

NAs

NAs

Pass

**4.1.3 Width and strength**

Specimen 2F05401 was assessed.

The minimum width of straps were as follows:

Waist straps	45 mm
Shoulder straps	45 mm
Thigh straps	45 mm
Sub-pelvic straps	45 mm

Pass

Pass

Pass

Pass

These were not less than the minimum 41 mm specified.

When tested as specified with the 22.0 kN load, the straps 2F02701A to 2F02701E and 2F02702A to 2F02702E performed as follows:

Waist straps	withstood the test without breaking
Shoulder straps	withstood the test without breaking
Thigh straps	withstood the test without breaking
Pelvic straps	withstood the test without breaking

Pass

Pass

Pass

Pass

**4.2 Connecting components****4.2.1 Full body harness component connections and terminations**

Specimen 2F05401 was assessed.

Connection of all full body harness components to each other and terminations of all full body harness components were by means of Class I or Class II connectors.

Pass

*A dorsal D-ring was used to connect to fall protection system.*

*Buckles were used for connecting straps together.*

**4.2.2 Connection to systems or elements external to the full body harness****4.2.2.1 There were no external systems or non-integral elements.**

NAs

**4.2.2.2 The full body harness was not integrally connected to a fall arrest systems or elements.**

NAs

**4.3 Keeper**

Specimen 2F05401 was assessed.

All webbing straps with a free end had a keeper loop of the required size to reduce the possibility of accidental disengagement of the strap from its functioning position. **Pass**

**4.4 Tongue type buckles**

Specimen 2F05401 was assessed.

Tongue buckles incorporated in the full body harness had a single tongue. **Pass**

**4.5 Fall arrest indicators**

Specimen 2F05404 was assessed.

The full body harness included a built-in fall arrest indicator. **Pass**

When tested as required by 5.3 and as specified in 6.2.6, the fall arrest indicator activated to give a permanent, readily visible warning. **Pass**

**4.6 Avoidance of the genital area**

Specimen 2F05401 was assessed.

Load bearing components of the full body harness, when worn correctly and properly adjusted did not pass over the genitals of the test subject. **Pass**

**4.7 Classification**

All specimens were assessed.

They satisfied the requirements of a Class A full body harness. **Pass**

The full body harness was classified as follows:

- 1) Class A: Fall arrest **Pass**
- 2) Class P: Work positioning **Pass**

**4.8 Class A, Fall arrest**

Specimen 2F05401 was assessed.

- a) One Class 1 dorsal connector (D-ring) was affixed to both shoulder straps. **Pass**
- b) The full body harness was not integrally attached to a certified subsystem or element with a dorsal Class I / Class II connector affixed directly to both shoulder straps. **NAp**

*A sub-pelvic strap was fitted.*

*The dorsal connector was a sliding D-ring.*

A waist belt equipped with a comfort pad was fitted across both shoulder straps. This limits the downward creep of the sliding D-ring towards the waist of the user. **Pass**

**4.12 Class P, Work positioning**

Specimen 2F05403 was assessed.

A connector (D-ring) required for Class A was incorporated.

Pass

Two Class I connectors (D-rings) were fitted at the waist level.

Pass

**5.2 Drop test****5.2.1 Class A, Feet first**

Specimen 2F05401 was assessed.

- a) The test mass was arrested. Pass
- b) The test mass remained suspended for 10 minutes after the drop. Pass
- c) All connectors remained connected. Pass
- d) The angle of the test mass at rest after the drop was 8°. This is less than the maximum 30° permitted. Pass
- e) The fall arrest indicator activated to give a permanent, readily visible warning. Pass
- f) The harness stretch "xh" was 10.5 inches. This is not more than the value "18 inches" stated in the manufacturer's instructions. Pass

**5.2.2 Class A, Head first**

Specimen 2F05402 was assessed.

- a) The test mass was arrested. Pass
- b) The test mass remained suspended for 10 minutes after the drop. Pass
- c) All connectors remained connected. Pass
- d) The fall arrest indicator activated to give a permanent, readily visible warning. Pass

**5.2.3 Class P**

Specimen 2F05403 was assessed.

- a) The test mass was arrested. Pass
- b) The test mass remained suspended for 10 minutes after the drop. Pass
- c) All connectors remained connected. Pass

**5.3 Fall arrest indicator - Dynamic test**

Specimen 2F05404 was assessed.

- a) The fall arrest indicator activated. Pass
- b) There was a permanent readily visible warning after the test. Pass

**Estimates of the uncertainty of measurement**

Clause	Test	Uncertainty
4.1	Fibre webbing – strap width	0.2mm
	Fibre webbing – strap loading	See Note 1
4.2	Connecting components	See Note 1
4.3	Keeper	See Note 1
4.4	Tongue type buckles	See Note 1
4.5	Fall arrest indicator	See Note 1
4.6	Protection of the genital area	See Note 1
4.7	Classification	See Note 1
4.8	Class A – Fall arrest	See Note 1
4.9	Class D – Suspension and controlled descent	See Note 1
4.10	Class E – Limited access	See Note 1
4.11	Class L – Ladder climbing	See Note 1
4.12	Class P – Work positioning	See Note 1
4.13	Alternative applications	NAs
4.14	Alternative materials & construction	NAs
5.2	Drop test – angle at rest	$\pm 0.2^\circ$
5.2	Drop test – stretch	$\pm 1.4\%$
5.3	Fall arrest indicator static test	See Note 1
5.3	Fall arrest indicator dynamic test	See Note 1
7.1	Markings	NAp
7.2	Information	NAp

Note 1. 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.

Note 2. The uncertainty value is based on a standard uncertainty multiplied by a coverage factor  $k = 2$ , which provides for a confidence level of approximately 95%. Values expressed as a percentage (%) are relative.

Note 3. It should be noted that the above values have not been taken into account when making assessments against the pass/fail criteria.



## ANNEX

This Annex comprises one section.

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

END OF REPORT

Jinhua Jech Tools Co., Ltd –  
Full body harness, model JE136103G



INSPEC Testing Services' specimen 2F05401

24 April 2018