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# Test Report

## Personal Fall Arrest Equipment ANSI/ASSE Z359.3-2019 Lanyards and Positioning Lanyards

**Report no:** 2.20.09.02

**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/0756

**Order received:** 18 June 2020

**Model:** JE311016

**Dates of tests:** 10 July 2020 to 7 September 2020

**Signed:**

Steven Sum, Laboratory Manager

**Issued:** 10 September 2020

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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 Accreditation.

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**Summary of assessment \***

| Clause    | Requirement                                              |                             | Assessment<br>(See Key) |
|-----------|----------------------------------------------------------|-----------------------------|-------------------------|
| 3.2       | Component and Element Requirements                       |                             | Ltd                     |
| 3.2.3.1   | Hardware elements (ANSI/ASSP Z359.12)                    |                             | NAs                     |
| 3.3       | Lanyard and Positioning Lanyard Design Requirements      |                             | Ltd                     |
| 3.4.1     | Fixed length lanyards                                    | Breaking strength           |                         |
| 3.4.2     | Adjustable lanyards                                      | Slippage                    |                         |
|           |                                                          | Breaking strength           |                         |
| 3.4.3     | Lanyards and adjustable lanyards                         | Dynamic strength            |                         |
| 3.5.1     | Positioning lanyards                                     | Breaking strength           | NAp                     |
| 3.5.2     | Adjustable positioning lanyards                          | Slippage test               | Pass                    |
|           |                                                          | Breaking strength           | Pass                    |
| 3.5.3     | Positioning lanyards and adjustable positioning lanyards | Dynamic strength            | Pass                    |
| 3.5.4     | Positioning lanyards                                     | Breaking strength (abraded) | NAp                     |
| 3.5.5     | Adjustable positioning lanyard                           | Breaking strength (abraded) | Pass                    |
| 5.1 / 5.2 | Marking Requirements                                     |                             | Ltd                     |
| 5.3       | Instruction Requirements                                 |                             | Ltd                     |

**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**

| <b>Product</b>                                  | <b>Quantity</b> | <b>Date received</b> | <b>INSPEC specimen no.<br/>(2H141+)</b> |
|-------------------------------------------------|-----------------|----------------------|-----------------------------------------|
| Positioning lanyard, adjustable, model JE311016 | 15              | 18 June 2020         | 01 to 15                                |

**Procedures**

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

Testing was performed in accordance with ANSI Z359.3-2019 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****3 Design Requirements****3.2 Component and Element Requirements**

Specimen 2H14101 was assessed.

|         |                                                                                                                                                       |      |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 3.2.1   | The materials and characteristics of synthetic fibres used in the construction of the positioning lanyard were not assessed. Manufacturer to certify. | NAs  |
| 3.2.2   | The specimen was made of webbing.                                                                                                                     | NAp  |
| 3.2.3.1 | Testing of all hardware elements was not requested.                                                                                                   | NAs  |
| 3.2.3.2 | The positioning lanyard was protected from concentrated wear when in contact with metal connectors. Wear pieces were used.                            | Pass |

**3.3 Lanyard and Positioning Lanyard Design Requirements.**

Specimen 2H14101 was assessed.

|         |                                                                                                                           |      |
|---------|---------------------------------------------------------------------------------------------------------------------------|------|
| 3.3.1   | The measured maximum length of the positioning lanyard was 5.94 ft.                                                       |      |
| 3.3.2   | The specimen was designed in such a manner that the adjustment stopped when the adjuster was released.                    | Pass |
| 3.3.3   | The end terminations satisfied 3.3.3.2 as appropriate. (See below).                                                       | Ltd  |
| 3.3.3.1 | This clause is not applicable to the product tested.                                                                      | NAp  |
| 3.3.3.2 | Lock stitching and back stitching used on all stitched terminations were not assessed. Manufacturer to certify.           | NAs  |
|         | The materials and characteristics of threads used were not assessed. Manufacturer to certify.                             | NAs  |
|         | Threads used for sewing the positioning lanyard were black colour. This contrasted with the yellow colour of the webbing. | Pass |
|         | There were no formed eye terminations.                                                                                    | NAp  |
|         | The ends of sewn materials were hot-cut so as to prevent unravelling.                                                     | Pass |
| 3.3.3.3 | Swaged terminations - not applicable to the product tested.                                                               | NAp  |
| 3.3.3.4 | Chain fittings - not applicable to the product tested.                                                                    | NAp  |

**3.5 Positioning Lanyard and Adjustable Positioning Lanyard Performance Requirements**

Specimens 2H14101, 2H14102 and 2H14103 were assessed.

- |       |                                                                                                                                                                                            |      |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 3.5.1 | The clause was not applicable to the specimens tested.                                                                                                                                     | NAp  |
| 3.5.2 | When tested in accordance with 4.2.3, the specimens maintained their adjusted length when loaded to 1,000 pounds force for a period of 1 minute. There were no slippages of the adjusters. | Pass |
|       | When tested in accordance with 4.2.3, the specimens withstood the tensile test of 5,000 pounds applied for 1 minute without breaking.                                                      | Pass |
| 3.5.3 | Specimens 2H14104, 2H14105 and 2H14106 were assessed.                                                                                                                                      |      |
|       | When tested in accordance with 4.2.4, the specimens withstood the drop tests. The test weight was retained for a period of 1 minute.                                                       | Pass |
| 3.5.4 | The clause was not applicable to the specimens tested.                                                                                                                                     | NAp  |
| 3.5.5 | Specimens 2H14107 to 2H14109 were assessed.                                                                                                                                                |      |
|       | After abrasion conditioning and tested in accordance with 4.2.3, the specimens withstood the tensile tests of 3,600 pounds applied for 1 minute without breaking.                          | Pass |

## 5.1 Marking Requirements

- 5.1.1** Markings shall be in English. Pass
- 5.1.2** The legibility and attachment of required markings shall endure for the life of the component, subsystem or system being marked, was not assessed. NAs
- When pressure sensitive labels are used, they shall comply with the applicable provisions of UL 969, *Marking and Labeling Systems*, was not assessed. NAs
- Manufacturer to certify.
- Marking labels were provided electronically and used for assessment.*
- 5.1.3** Except for connectors, lanyards and positioning lanyards shall be marked to identify:
- a) year of manufacturer; [2020] Pass
  - b) manufacturer's identification; [JECH] Pass
  - c) part number; NAp
  - d) model designation (JE311016); Pass
  - e) Serial number; Pass
  - f) standard number; [ANSI Z359.3] Pass
  - g) capacity; [130-310 lbs] Pass
  - h) purpose; [positioning lanyard] Pass
  - i) the length; [4-6 ft] Pass
  - j) the material of construction; [polyester] Pass
  - k) the need to make only compatible connections Pass
  - l) warning to follow the manufacturer's instructions included with the equipment at time of shipment from the manufacturer. Pass

## 5.2 Specific Marking Requirements

In addition to the marking requirements of 5.1, lanyards and adjustable positioning shall be marked according to the requirements of this section.

- 5.2.1** Adjustable positioning lanyards shall be marked with:
- "DO NOT USE FOR FALL ARREST" Pass

### 5.3 Instruction Requirements

The manufacturer shall provide user instructions for lanyard and positioning lanyards according to the requirements of this section.

*User Instructions were provided electronically and used for assessment.*

|              |                                                                                                                                               |      |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>5.3.1</b> | Instructions were provided in English.                                                                                                        | Pass |
| <b>5.3.2</b> | Instructions shall be affixed to the lanyard and positioning lanyards before the product is shipped from the manufacturer.                    | NAs  |
| <b>5.3.3</b> | Instructions shall contain the following information:                                                                                         |      |
| a)           | a statement that the manufacturer's instructions shall be provided, and available to authorized persons                                       | Pass |
| b)           | manufacturer's name, address, website address and telephone number                                                                            | Pass |
| c)           | part number                                                                                                                                   | NAs  |
| d)           | model designation [JE311016]                                                                                                                  | Pass |
| e)           | intended use and purpose of the product                                                                                                       | Pass |
| f)           | proper method of use and limitation on use of the product                                                                                     | Pass |
| g)           | illustrations showing locations of markings on the product                                                                                    | Pass |
| h)           | reproduction of printed information on all markings                                                                                           | Pass |
| i)           | inspection procedures required to assure the product is in serviceable condition and operating correctly                                      | Pass |
| j)           | anchorage requirements as set forth in ANSI/ASSP Z359.2                                                                                       | Pass |
| k)           | criteria for removing product from service if it fails inspection                                                                             | Pass |
| l)           | procedures for cleaning, maintenance and storage                                                                                              | Pass |
| m)           | capacity                                                                                                                                      | Pass |
| n)           | space for recording inspection dates                                                                                                          | Pass |
| o)           | who is allowed or how repairs or alterations are made to the product                                                                          | Pass |
| p)           | require that the authorized person be provided a rescue plan and appropriate training before using the equipment where suspension could occur | Pass |
| <b>5.3.4</b> | Instructions shall contain warnings regarding:                                                                                                |      |
| a)           | not to use the lanyards or positioning lanyards for material handling                                                                         | Pass |
| b)           | altering the product                                                                                                                          | Pass |
| c)           | misusing the product                                                                                                                          | Pass |
| d)           | using combinations of components or subsystems, or both, which may affect or interfere with the safe function of each other                   | Pass |
| e)           | exposing the product to chemicals which may produce a harmful effect and to consult the manufacturer in cases of doubt                        | Pass |
| f)           | using the product around moving machinery and electrical hazards                                                                              | Pass |
| g)           | using the product near sharp edges and abrasive surfaces                                                                                      | Pass |
| h)           | the need to make only compatible connections and limitations of compatibility                                                                 | Pass |
| i)           | proper method of coupling the connector and checking that it is closed and locked                                                             | Pass |
| j)           | reading instructions and labels before use                                                                                                    | Pass |
| k)           | not removing or altering labels                                                                                                               | Pass |

**Estimates of the uncertainty of measurement**

| Clause    | Test                                                     |                             | Uncertainty |
|-----------|----------------------------------------------------------|-----------------------------|-------------|
| 3.2       | Component and Element Requirements                       |                             | -           |
| 3.2.3     | Hardware elements (ANSI/ASSP Z359.12)                    |                             | See report  |
| 3.3       | Lanyard and Positioning Lanyard Design Requirements      |                             | -           |
| 3.4.1     | Fixed length lanyard                                     | Breaking strength           | See Note 1  |
| 3.4.2     | Adjustable lanyard                                       | Slippage test               | ± 1.4%      |
|           |                                                          | Breaking strength           | See Note 1  |
| 3.4.3     | Lanyards and adjustable lanyards                         | Dynamic strength            | See Note 1  |
| 3.5.1     | Positioning lanyards                                     | Breaking strength           | See Note 1  |
| 3.5.2     | Adjustable positioning lanyard                           | Slippage test               | ± 1.4%      |
|           |                                                          | Breaking strength           | See Note 1  |
| 3.5.3     | Positioning lanyards and adjustable positioning lanyards | Dynamic strength            | See Note 1  |
| 3.5.4     | Positioning lanyards                                     | Breaking strength (abraded) | See Note 1  |
| 3.5.5     | Adjustable positioning lanyard                           | Breaking strength (abraded) | See Note 1  |
| 5.1 / 5.2 | Marking Requirements                                     |                             | -           |
| 5.3       | Instruction Requirements                                 |                             | -           |

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. -  
Positioning lanyard, adjustable, model JE311016

