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Test Report

ANSI Z359.15-2014
Single Anchor Lifelines and Fall Arresters

Report no: 2.21.02.11

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

Manufacturer: Jinhua Jech Tools Co., Ltd.

Client order: T/0850

Order received: 14 January 2021

Models: JE60160A - 25FT (Single Anchor Lifeline, 25FT)
JE60160A - 50FT (Single Anchor Lifeline, 50FT)
JE60160A - 100FT (Single Anchor Lifeline, 100FT)
JE60160A - 150FT (Single Anchor Lifeline, 150FT)
JE60160A - 200FT (Single Anchor Lifeline, 200FT)

Dates of tests: 15 January 2021 to 6 February 2021

Signed:

Steven Sum, Laboratory Manager

Issued: 8 February 2021

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)
3.1	**Single Anchor Lifeline Components**		
3.1.1	Integral connectors		NAs
3.1.2	Rope characteristics		NAs
3.1.3	Elastic elongation		Pass
3.1.4	Rope diameter		Pass
3.1.5	Rope fabrication		NAs
3.1.6	Materials		NAs
3.1.7	Lifelines supplied with factory terminations	Breaking strength	Pass
3.1.8.1		Spliced	Ltd
3.1.8.2		Stitched	NAp
3.1.8.3		Swaged	NAp
3.1.9	Breaking strength - lifeline supplied without factory termination		
3.1.10	Dual purposes / rope access or descent control applications		NAp
3.1.11	Residual static strength		Pass
3.1.12.1	Wire rope lifeline	Breaking strength	
3.1.12.2		Construction	
3.1.12.3		Factory terminations	
3.2	**Fall arrester Components**		
3.2.1	Integral connectors		
3.2.2	Non-integral energy absorber and energy absorbing lanyards		
3.2.3	Integral lanyards		
3.2.4	Locking (fall stopping) function		
3.2.5	Dynamic performance (manual override)		
3.2.6	Open with two consecutive and deliberate actions		
3.2.7	Knot or hitch		
3.2.8	Integral rings and openings		
3.2.9	Static strength		
3.2.10	Dynamic performance - ambient		
	Dynamic performance - hot		
	Dynamic performance - cold		
	Dynamic performance - wet		

Clause	Requirement	Assessment (see key)
3.2.11	Function test	
3.2.12	Residual static strength	
3.2.13	Corrosion resistance	
5.1 / 5.2	Marking requirements	
5.3 / 5.4	Instruction requirements	

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. (2J015+)
Single Anchor Lifeline, model JE60160A	21	13 January 2021	01-21

Procedures

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

Testing was performed in accordance with ANSI Z359.15-2014 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.

The client made the following declarations:

Single anchor lifelines, models JE60160A are available in 25FT, 50FT, 100FT, 150FT and 200FT lengths. They have the same design, are constructed in same way and use the same materials. Only the lengths are different.

Result details

3 Design requirements

3.1 Single Anchor Lifeline Components

3.1.1 Connectors

Specimen 2J01501 was assessed.

Testing of integral connectors was not requested NAs

3.1.2 Rope characteristics

This clause was not assessed. Manufacturer to certify. NAs

3.1.3 Elastic elongation

Specimens 2J01519 to 2J01521 were assessed.

The average elastic elongation of a single anchor lifeline was 9% at a load of 1800 pounds. This was not greater than the 10% permitted. Pass

3.1.4 Rope diameter

Specimens 2J01519 to 2J01520 were assessed.

The average minimum nominal diameter measured was 0.62 inches. This value is more than 0.433 inch permitted. Pass

3.1.5 Rope fabrication

This clause was not assessed. Manufacturer to certify. NAs

3.1.6 Materials

This clause was not assessed. Manufacturer to certify. NAs

3.1.7 Lifeline supplied with factory termination – Breaking strength

Specimens 2J01516 to 2J01518 were assessed.

All specimens withstood the tensile tests of 5,000 pounds applied for 1 minute without breaking. Pass

3.1.8 Single anchor lifelines supplied with a factory termination

3.1.8.1 Spliced terminations

Specimen 2J01501 was assessed.

a) The rope manufacturer's recommendations for the formed eye terminations in rope were not submitted. Manufacturer to certify. NAs

b) The rope construction was of three strands.

The eye splice included four tucks. This is not less than the minimum 4 tucks specified. Pass

c) A properly sized thimble was incorporated within the eye terminations. Pass

d) Knots were not used to form the end terminations. Pass

e) The ends of the rope were finished so as to prevent unravelling or unsplicing. Pass

3.1.8.2 Stitched terminations

There were no stitched eye terminations. NAp

3.1.8.3 Swaged terminations

There were no swaged eye terminations. NAp

3.1.10 Dual purposes – rope access / descent control applications

Not claimed. NAp

3.1.11 Residual static strength

Specimens 2J01501 to 2J01503 were assessed.

Following the dynamic performance tests, all specimens withstood the tensile test of 1,800 pounds applied for 1 minute without breaking. Pass

Estimates of the uncertainty of measurement

Clause	Test		Uncertainty
3.1.1	Connectors		See report
3.1.2	Rope to meet clause 7.2.1		-
3.1.3	Elastic elongation		± 0.5%
3.1.4	Rope diameter		± 0.001 inches
3.1.5	Rope fabrication		-
3.1.6	Material characteristics		-
3.1.7	Breaking strength - lifeline supplied with factory termination		See Note 1
3.1.8	Single anchor lifelines supplied with a factory termination		-
3.1.9	Breaking strength – lifeline supplied without factory termination		See Note 1
3.1.10	Dual purposes – Rope access / Descent control applications		-
3.1.11	Residual static strength		See Note 1
3.1.12.1	Breaking strength – wire rope lifeline		See Note 1
3.1.12.2	Diameter and construction		± 0.001 inches
3.1.12.3	Factory terminations		-
3.2.1	Connectors		See report
3.2.2	Non-integral energy absorber and energy absorbing lanyards		See report
3.2.3.3	Breaking strength – lanyards integral to fall arresters		See Note 1
3.2.3.4	Integral connectors – lanyards integral to fall arresters		See report
3.2.4	Locking		-
3.2.5	Dynamic performance (Manual override)	Force	± 3.0%
		Fall distance	± 0.04 inches
3.2.8	Integral rings and openings		-
3.2.9	Static strength		See Note 1
3.2.10	Dynamic performance – ambient	Force	± 3.0%
		Fall distance	± 0.04 inches
	Dynamic performance – various conditions	Force	± 3.0%
		Fall distance	± 0.04 inches
3.2.11	Function test		-
3.2.12	Residual static strength		± 1.7%
3.2.13	Corrosion resistance		-
5.1 / 5.2	Marking requirements		See Note 1
5.3 / 5.4	Instruction requirements		See Note 1

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 assessment to the pass/fail criteria.

ANNEX

This Annex comprises two sections.

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

END OF REPORT

Jinhua Jech Tools Co., Ltd –
Single Anchor Lifeline, model JE60160A-200FT

INSPEC Testing Services' specimen 2J01501 29 January 2021