Protección contra caídas

Eslinga con absorbedor de energía

Descripción:

Eslinga de seguridad con suspensión y amortiguador, 4.5 cm de ancho por 1.8 m de largo, con 2 mosquetones pequeños de alta seguridad, color blanco, con tratamiento de zinc, tejido principal color azul.
Material: Fibra Polyester.
Cumple con los estándares de normativa ANSI de alto impacto. ANSI Z359.1 (2007).

Presentación:

Código: NS9100002
Color: Azul.
Unidad de Empaque: 1
Presentación: Bolsa
Caja Master: 20 Unidades

Características y usos:

Fabricado con tejido trenzado de polyester de alta resistencia, esta eslinga de detención de caídas de uso general se adapta a la mayoría de las situaciones. Recomendado para utilizarse en trabajos de alturas como en el exterior de edificaciones, andamios, entre otros.

INSPEC Technical Services (Kunshan) Co Ltd • 8 Jin Yang East Road • Lu Jia Zhen • Kunshan • Jiangsu • China
Email: testing@inspec.asia Website: www.inspec-international.com
Tel: +86 (512) 5011 2646 Fax: +86 (512) 5011 2656

Test Report

Personal Fall Arrest Equipment
ANSI Z359.13-2009
Energy Absorbing Lanyard

Report no: 2.14.11.10

Client: IWT COLOMBIA SAS
Autopista Medellin Km 7
CELTA Trade Park, Bodega 18-4
Funza, Colombia

Manufacturer: Nara Safe Ltd
Unit A & B, 15/F Neich Tower,
128 Gloucester Road,
Wanchai, Hong Kong.

Client order: 140815

Order received: 23 October 2014

Model: NS9100002

Dates of test: 4 November 2014 to 13 November 2014

Signed:

Steven Sum, Laboratory Manager

Issued: 9 December 2014

Conditions

This report may be reproduced and distributed to your clients, provided that it is reproduced and distributed in full.

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 ACLASS Scope of Accreditation.

This report has been provided in accordance with our standard Terms of Business, which can be viewed at, and printed from:

http://inspec-international.com/ToB.pdf

If you have difficulty accessing the Terms of Business, you may contact us for a copy.

Summary of assessment – Personal Energy Absorber

Clause	Requirement	Assessment (See Key)
3.1.1	Classifications	
3.1.2	Material	
3.1.3	Terminations	
3.1.4	Connectors	
3.1.5	Deployment indicator	
3.1.6	Activation force	
3.1.7	Static strength	
3.1.8	Dynamic performance – ambient dry	
3.1.9	Dynamic performance – ambient wet	Pass
	Dynamic performance – cold dry	Pass
	Dynamic performance – hot dry	Pass
5.1 / 5.2	Marking	
5.3 / 5.4	Instructions	

Summary of assessment – Personal Energy Absorbing Lanyard*

Clause	Requirement	Assessment (See Key)
3.2	Energy absorber	
3.2.1	Material	
3.2.2	Terminations	
3.2.3	Connectors	
3.2.4	Dynamic performance – ambient dry	Pass
3.2.5	Static strength	Pass
3.2.6	Abrasion test	
3.2.7	Static test for wrap-around lanyards	
3.2.8	Static test for Y-lanyards	
3.2.9	Dynamic test for Y-lanyards - Dual connection	
3.2.10	Dynamic test for Y-lanyards - Hip connection	
5.1 / 5.2	Marking	
5.3 / 5.4	Instructions	

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. (job 2B131 +)
Energy Absorbing Lanyard, model NS9100002	04	28 July 2014	01 to 04

Procedures

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

Testing was performed in accordance with ANSI Z359.13-2009 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 – Personal Energy Absorber

3.1.9.1 Dynamic performance test - Ambient wet condition

Specimen 2B13102 was assessed.

During the dynamic performance test, the average arrest force was 750 pounds. Pass
This value is less than the maximum 1,125 pounds permitted.
See Annex 1 for the plot of force versus time.

During the dynamic performance test, the maximum arrest force was 1017 pounds. Pass
This value is less than the maximum 1,800 pounds permitted.
See Annex 1 for the plot of force versus time.

During the dynamic performance test, the deployment distance was 46.5 inches. Pass
This value is less than the maximum 48 inches permitted.

3.1.9.2 Dynamic performance test - Cold dry condition

Specimen 2B13103 was assessed.

During the dynamic performance test, the average arrest force was 784 pounds. Pass
This value is less than the maximum 1125 pounds permitted.
See Annex 1 for the plot of force versus time.

During the dynamic performance test, the maximum arrest force was 1054 pounds. Pass
This value is less than the maximum 1,800 pounds permitted.
See Annex 1 for the plot of force versus time.

During the dynamic performance test, the deployment distance was 46.7 inches. Pass
This value is less than the maximum 48 inches permitted.

3.1.9.3 Dynamic performance test - Hot dry condition

Specimen 2B13104 was assessed.

During the dynamic performance test, the average arrest force was 696 pounds. Pass
This value is less than the maximum 900 pounds permitted.
See Annex 1 for the plot of force versus time.

During the dynamic performance test, the maximum arrest force was 960 pounds. Pass
This value is less than the maximum 1,800 pounds permitted.
See Annex 1 for the plot of force versus time.

During the dynamic performance test, the deployment distance was 46.9 inches. Pass
This value is less than the maximum 48 inches permitted.

Result details – Personal Energy Absorbing Lanyard

3.2.4 Dynamic performance test – Ambient dry condition

Specimen 2B13101 was assessed.

During the dynamic performance test, the average arrest force was 707 pounds. Pass
This value is less than the maximum 900 pounds permitted.
See Annex 1 for the plot of force versus time.

During the dynamic performance test, the maximum arrest force was 879 pounds. Pass
This value is less than the maximum 1,800 pounds permitted.
See Annex 1 for the plot of force versus time.

During the dynamic performance test, the deployment distance was 44.9 inches. Pass
This value is less than the maximum 48 inches permitted.

3.2.5 Static strength

Specimen 2B13101 was assessed.

It withstood the tensile test of 5,000 pounds applied for 1 minute without breaking. Pass

Estimates of the uncertainty of measurement – Personal Energy Absorber

Clause	Test		Uncertainty
3.1.1	Carabineer & snaphook, if fitted		*
3.1.2	Materials		NAs
3.1.3	Terminations		-
3.1.4	Connectors		-
3.1.5	Deployment indicator		*
3.1.6	Activation force		±0.3%
	Permanent elongation of the sample		±0.8%
3.1.7	Static strength		±0.3%
3.1.8	Dynamic performance – ambient dry	Force	±2.6%
		Deployment distance	±0.6%
3.1.9	Dynamic performance – other conditions	Force	±2.6%
		Deployment distance	±0.6%
5.1 / 5.2	Marking		-
5.3 / 5.4	Information		-

Estimates of the uncertainty of measurement – Personal Energy Absorbing Lanyard

Clause	Test	Uncertainty
3.2	Personal Energy Absorbing Lanyard Component, if fitted	See report
3.2.1	Materials	-
3.2.2	Terminations	-
3.2.3	Connectors	See report
3.2.4	Dynamic performance test – average arrest force	±2.6%
	Dynamic performance test – maximum arrest force	±2.6%
	Dynamic performance test – deployment distance	±0.4%
3.2.5	Static strength - slippage	±0.6mm
3.2.6	Abrasion and Static strength - Wrap-around energy absorbing lanyards only	*
3.2.7	Static strength - Wrap-around energy absorbing lanyards only	*
3.2.8	Static strength – Y-lanyards only	*
3.2.9	Dynamic test - Y-lanyards only – Dual connection	±2.6%
3.2.10	Dynamic test - Y-lanyards only – Hip connection	*
5.1 / 5.2.4	Marking	-
5.3 / 5.4.4	Information	-

* 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

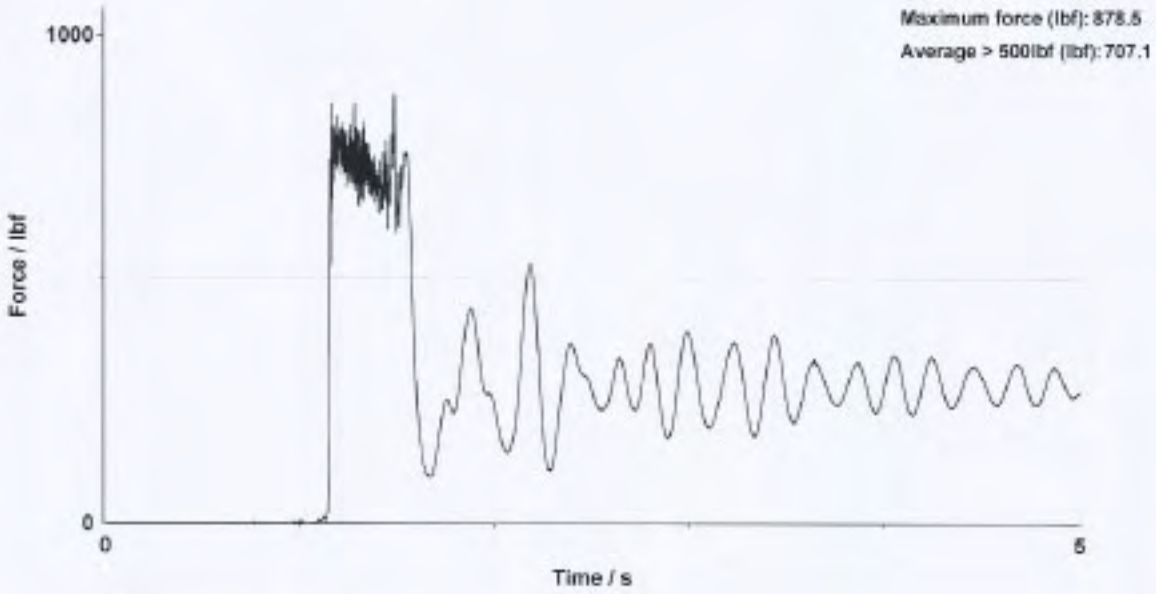
This Annex comprises two sections.

1. Plot of arrest force versus time. (4 pages)

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

INSPEC Technical Services

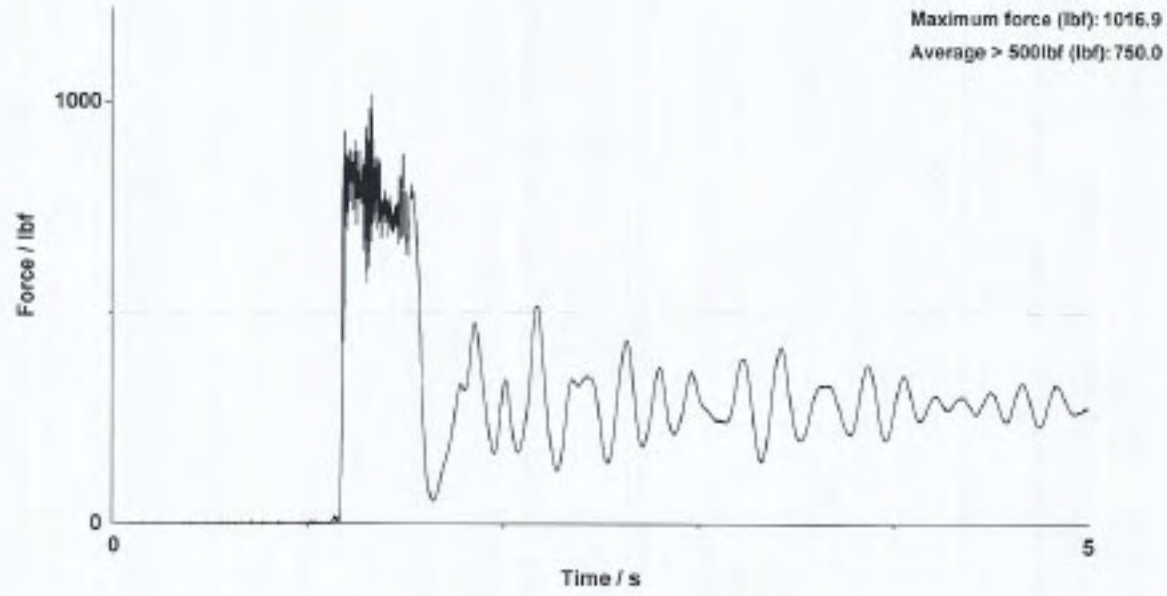
Technician:	TAN
Standard	ANSI Z359.13 Energy absorbing lanyard
Sample / File name:	2B13101
Drop item	ANSI drop mass, 128 kg
Orientation/Attachment Point:	Centre eyebolt
Time and Date of Test:	12:48 04/11/14



Results do not achieve full ACLASS status until a formal test report has been issued

INSPEC Technical Services

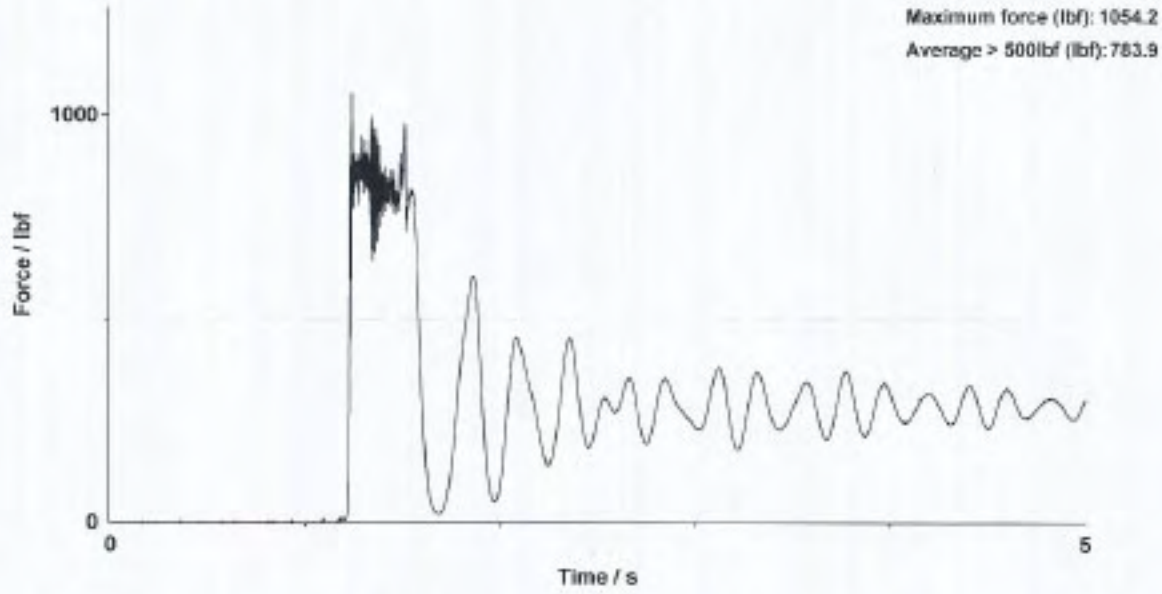
Technician:	TAN
Standard	ANSI Z359.13 Energy absorber
Sample / File name:	2B13102
Drop item	ANSI drop mass, 128 kg
Orientation/Attachment Point:	Centre eyebolt
Time and Date of Test:	15:57 13/11/14



Results do not achieve full ACLASS status until a formal test report has been issued.

INSPEC Technical Services

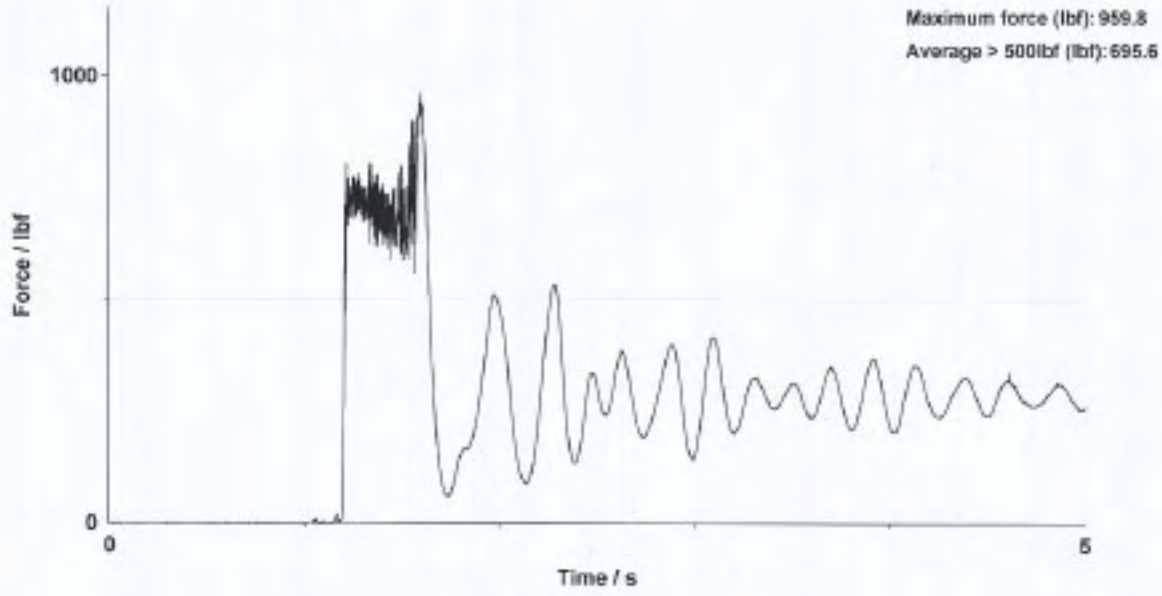
Technician:	TAN
Standard	ANSI Z359.13 Energy absober
Sample / File name:	2B13103
Drop item	ANSI drop mass, 128 kg
Orientation/Attachment Point:	Centre eyebolt
Time and Date of Test:	16:03 12/11/14



Results do not achieve full ACLASS status until a formal test report has been issued.

INSPEC Technical Services

Technician:	TAN
Standard	ANSI Z359.13 Energy absorber
Sample / File name:	2B13104
Drop item	ANSI drop mass, 128 kg
Orientation/Attachment Point:	Centre eyebolt
Time and Date of Test:	16:27 11/11/14



Results do not achieve full ACLASS status until a formal test report has been issued.

IWT COLOMBIA SAS – Energy Absorbing Lanyard,
model NS9100002

INSPEC Testing Services' specimen 2B13101 4 November 2014