INSPEC

56 LESLIE HOUGH WAY • SALFORD • GREATER MANCHESTER • M6 6AJ • UNITED KINGDOM
Email: testing@inspec-international.com Website: www.inspec-international.com
Tel: +44 (0)16 1737 0699 Fax: +44 (0)16 1736 0101

Test Report

EN 361 : 2002

Report no:	2.10.08.31
Client:	INSPEC Asia Pacific Room 515, Huawen Plaza, No. 999, West Zhongshan Road, Changning District, Shanghai 200051, China
Client order:	TA10/0135
Order received:	10 August 2010
Manufacturer:	Jinhua Jech Tools Co., Ltd.
Model:	JE1047
Dates of tests:	12 to 28 August 2010

Conditions:

This report shall not be reproduced, except in full, without the written approval of INSPEC International Limited.

Opinions, comments and interpretations expressed herein are outside the scope of UKAS accreditation and are shown in italics in this report. Copies of any INSPEC interpretations referenced in this report are available upon request.

Tests marked ☒ are not included in the UKAS accreditation schedule for INSPEC International Limited.

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

Signed:

Steven Sum, Laboratory Manager

Issued: 16 September 2010

Summary of assessment *

Clause	Requirement	Assessment (See Key)
4.1	Design & ergonomics	Ltd
4.2	Materials and construction	Ltd
4.3	Static strength ①	Pass
4.4	Dynamic performance ①	Pass
4.5	Additional elements ①	NAp
4.6	Marking and information	see 6 & 7 below
6	Marking	Pass
7	Information	
8	Packaging	Pass

① INSPEC Interpretation applies

Key

	Shading indicates 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 which are the subjects of this report.

Submission details

Product	Quantity	Date received	INSPEC specimen no.
Full body harness, model JE1047	05	10 August 2010	2W03801 to 2W03805

Procedures

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

Testing was performed in accordance with EN 361:2002, to which reference should be made when reading this test 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

Specimens 2W03801 and 2W03803 were assessed against the general requirements specified in clause 4.1 of EN 363:2002. The detailed results of the assessment are given on page 5 of this report.

4.2 Materials and construction

Specimens 2W03801 and 2W03802 were assessed.

The materials used for webbing and threads and their characteristics were not assessed. Manufacturer to certify.	NAs
Threads used for sewing the harness were white colour. This contrasted with the blue and orange colours of the webbing.	Pass
The harness incorporated pelvic straps.	Pass
The harness incorporated shoulder straps.	Pass
The harness incorporated means to adjust the straps to fit the wearer.	Pass
The straps did not migrate or self-loosen.	Pass
The minimum width of primary straps was 45 mm. This was more than the permitted minimum of 40 mm.	Pass
The minimum width of secondary straps was 45 mm. This was more than the permitted minimum of 20 mm.	Pass
During the static strength test, it was confirmed that the straps which supported and exerted pressure on the torso dummy were primary straps.	Pass
Specimen 2W03802 incorporated one fall arrest attachment element. It was located at the back of the harness.	Pass
The location of fall arrest attachment element was at a level above the centre of gravity of the torso dummy.	Pass
The harness was not incorporated within a garment.	NAp
It was possible visually to inspect the whole harness.	Pass

The securing buckles of the specimen could not be assembled in more than one manner — Pass

Metallic elements incorporated into specimen 2W03805 satisfied the corrosion protection requirements specified in 5.13 of EN 364:1992. No base metal corrosion was found on the metallic elements after the corrosion test. — Pass

4.3 Static strength

Specimen 2W03802 was assessed.

When tested at the back attachment element, specimen 2W03802 withstood the 15 kN force applied upwards for 3 minutes without releasing the torso dummy. — Pass

When tested at the back attachment element, specimen 2W03802 withstood the 10 kN force applied downwards for 3 minutes without releasing the torso dummy. — Pass

4.4 Dynamic performance

When specimen 2W03803 was tested at the back attachment element, the harness withstood the feet-first drop test without releasing the torso dummy. The torso dummy was arrested in the head-up position and the angle of its back to the vertical was 9 degrees, which was less than the maximum 50 degrees permitted. — Pass

When specimen 2W03803 was tested at the back attachment element, the harness withstood the head-first drop test without releasing the torso dummy. The torso dummy was arrested in the head-up position and the angle of its back to the vertical was 9 degrees, which was less than the maximum 50 degrees permitted. — Pass

After the head-first drop test was done, the top portion of the adjustable sliding dorsal plate was found broken.

4.5 Additional elements

There was no additional attachment element. — NAp

4.6 Marking and information - see clauses 6 and 7 below.

6 Marking

Specimen 2W03801 was assessed against the specific requirements of EN 361:2002 and the results are detailed below.

Results of the assessment of the same specimen against the requirements specified in clause 2.2 of EN 365:1992 are given on page 6 of this report.

The text assessed was in English. — Pass

a) The harness was marked with a pictogram. The marking was printed on a label secured by plastic sleeve and stitched on to the harness. — Pass

b) Each fall arrest attachment element of the harness was marked with a capital letter "A". The marking was printed on a second label stitched on to the harness. The height of the letter "A" was 10 mm. This was the same as minimum 10 mm recommended by Recommendation for use sheet CNB/P/11.057, issued by the Co-ordination of Notified Bodies Committee. Pass

This product has variable length straps and the position of the letter "A" relative to the attachment point varies depending upon the size of the wearer. Recommendation for use sheet CNB/P/11.057, issued by the Co-ordination of Notified Bodies Committee recommends a maximum 50mm separation between the "A" and the attachment point. However, the sheet does not consider variable length straps and therefore cannot be applied to this product.

c) The harness was marked with the model / type identification "JE1047" on a label mentioned in (a). Pass

d) The harness was marked "EN 361" on a label mentioned in (a). Pass

7 Information supplied by the manufacturer

Not requested. NAs

8 Packaging

Specimen 2W03801 was assessed.

The harness was wrapped in an orange colour fabric bag. Pass

EN 363:2002, Clause 4.1, Design and ergonomics

A fall arrest system shall be so designed and manufactured:

- that, in the foreseeable conditions of use for which it is intended, the user can perform the risk-related activity normally while enjoying appropriate protection of the highest possible level; NAs
- as to preclude risks and other nuisance factors under foreseeable conditions of use; NAs
- as to facilitate correct positioning on the user and to remain in place for the foreseeable period of use, bearing in mind ambient factors, movements to be made and postures to be adopted. For this purpose, it shall be possible to optimize the adoption of a full body harness to user morphology by all appropriate means, such as adequate adjustment elements or the provision of an adequate size range; Yes
- that it is as light as possible without prejudicing design strength and efficiency; NAs
- as to become not incorrectly adjusted without the user's knowledge under the foreseeable conditions of use; Yes
- that, under the foreseeable conditions of use, the vertical drop of the user is minimized to prevent collision with obstacles and the braking force does not, however, attain the threshold value at which physical injury or the tearing or rupture of any component or element which might cause the user to fall can be expected to occur; NAs
- that, after arresting, the user is maintained in a correct position in which he may await help if necessary. Yes

Only the characteristics given in indents 3, 5 and 7 lend themselves to objective assessment. Compliance or otherwise with the relevant European standard, against which the specimen has been tested, support the assessments made against those characteristics.

The characteristics given in the other indents, whilst being desirable attributes, cannot be objectively assessed by a testing laboratory, because they involve parameters about which the technician may have only an opinion, not factual knowledge.

EN 365:1992, Clause 2.2, Marking

Each detachable component of a system shall be clearly, indelibly and permanently marked, by any suitable method not having a harmful effect on the materials, with the following information:

Identification mark comprising:

- the last 2 digits of the year of manufacture;	Yes
- the manufacturer's or supplier's name, trademark or other means of identification;	Yes
- the manufacturer's batch number or serial number of the component.	Yes
The characters in the identification mark shall be readable and discernible.	Yes

ANNEX

This Annex comprises two sections.

1. Estimates of the uncertainty of measurement. (1 page)
2. Photograph of the product tested. (1 page)

EN 361 : 2002

Estimates of the uncertainty of measurement

Clause	Requirement	Uncertainty
4.1	Design & ergonomics	-
4.2	Materials and construction	*
4.3	Static strength	2.3%
4.4	Dynamic performance	0.4%
4.5	Additional elements	-
4.6	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.

Jinhua Jech Tools Co., Ltd – Full body harness, model JE1047

INSPEC Testing Services' sample number 2W03801 12 August 2010