



INSPECTION REPORT N° 28-X52-1-6333137-1001-01_eng

BV Job nr: 6333137	Date of issuance: 20.01.2017	Page 1 of 31
Project: Scaffolds, witness testing	Ref: ES.2161537_R.1	
BV Client: ALUFASE, S.A.	Manufacturer / Vendor: ALUFASE, S.A.	

Inspection requested by: ALUFASE, S.A. (Emilio Álvarez)	
BV Inspection performed as Recognized Authority: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (....specify what recognition...)	
P/o nr: ES.2161537_R.1 (client to BV)	P/o nr: --- (client to Manufacturer)
Inspection performed on: 14, 15 & 16 of June , 2016 16 & 20 of January, 2017	Location: ALUFASE Ctra. M-114 Km. 1 28864 Ajalvir (Madrid)
Previous Inspection: NA	Next Inspection: NA

MATERIAL / SUPPLY / SUBJECT OF INSPECTION	Drawing	QTY
Aluminum Scaffolds :		
- MODEL 300, Length 1.12m (3.67ft), simple width 0.74m (2.43ft)	4AS112 rev.1	1
- MODEL 300, Length 1.91m (6.27ft), simple width 0.74m (2.43ft)	4AS191 rev.1	1
- MODEL 300 Aluspeed, Length 1.91m (6.27ft), simple width 0.74m (2.43ft)	Aluspeed rev.1	1
- MODEL 300, Length 2.50m (8.20ft), simple width 0.74m (2.43ft)	4AS250 rev.1	1
- MODEL 300, Length 3.05m (10ft), simple width 0.74m (2.43ft)	4AS305 rev.1	1

REFERENCE DOCUMENTS: See continuation sheet for additional documents: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Title	Reference n°	Rev.	Approved by	Date
OSHA Standard 1910.28 - Safety requirements for scaffolding	29CFR1910.28	---	United States Department of Labor	2016
OSHA Standard 1910.29 - Manually propelled mobile ladder stands and scaffolds	29CFR1910.29	---	United States Department of Labor	2016
OSHA Standard 1926 Subpart L - Scaffolds	1926.450 – 1926.454	---	United States Department of Labor	2016
ANSI A10.8-2001 Safety requirements for scaffolding	ANSI A10.8-2001	---	American Society of Safety Engineers	2001
UNE-EN 1004:2006 Access scaffolds and mobile scaffolds	UNE-EN 1004:2006	---	Spanish association for Standardization	2006

INSPECTION RESULT
<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory: Non Conformities Raised (Total number of NCR :.....)

BV Inspector: SERGIO BORRÁS	BV Coordinator: JOSÉ Mª PÉREZ
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BV Office: MADRID (SPAIN)	Attachments: <input checked="" type="checkbox"/> Yes (See List of Attachments) <input type="checkbox"/> No
Distribution: <input checked="" type="checkbox"/> CLIENT <input type="checkbox"/> MANUFACTURER <input checked="" type="checkbox"/> BV <input type="checkbox"/> OTHER (specify)	


Stage of inspection :

Before manufacturing During manufacturing Final Packing

Type of inspection :

Pre-inspection meeting Document and QC record review Visual examination, checks
 Witnessing tests Manufacturing progress status Vendor assessment
 Final inspection Packing

Stamping :

No  

Results of inspection :

Satisfactory Unsatisfactory

Non Conformities Reports (NCR): NA

o NCR's issued during reported period :

o List of outstanding NCR's :

Main Conclusions & Remarks: (for details see continuation sheet)

BV inspector witnessed testing performed by Alufase, as described in this report. No written test procedure was available. There was no documented acceptance criteria available. BV has not performed any design appraisal.

See detailed inspection in the following pages.

Next visit scheduled: NA

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INSPECTION DETAILS:

ATTENDEES : See continuation sheet for additional documents: Yes No

Name	Company	Title (*)	Note
Emilio Álvarez	ALUFASE, S.A.	Quality Dept.	--
Haritz Lizaso Centeno	ALUFASE, S.A.	Quality Dept.	--
Sergio Borrás	Bureau Veritas	BV Inspector - supervisor	--

(*) specify if BV inspector has role as supervisor or mentor (e.g. "BV Inspector – supervisor –")

MEASURING EQUIPMENT USED: See continuation sheet for additional documents: Yes No

Equipment Type	Equipment Identity n°	Last Calibration date	Expiry date
Scale 0 -1500 Kg (0-3307lbs)	BAXTRAN BR15 sn1606246	12/07/2016	12/07/2017
Measuring tape 3m (118in)	MTE28179	---	---
Measuring tape 5m (197in)	---	---	---
Dial gauge micrometer	SEA07008	29/09/2015	29/09/2017
Dynamometer	DYNAFOR EM-E08-006	23/09/2015	23/09/2018
Caliper INSIZE	MTE-02-178	31/05/2016	31/05/2017

LIST OF NON CONFORMITIES ISSUED:

NC identification n°	Description of the Anomaly
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LIST OF NON CONFORMITIES CLOSED:

NC id number	Ref report n°	Issued on	Description
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LIST OF ATTACHEMENTS

Type of document	Identification number	Description
FP_truck_(1926_451_b_9)	Forest truck Birch	Plywood MSDS (1 page)
QC Aluminium	QC Aluminium	Aluminium MSDS (3 pages)
Drawings AS (single width)	4AS112, 4AS191, Aluspeed, 4AS250, 4AS305	Drawings single width configuration – Ed. 11/11/2016
Calibration certificate	3140066	MED01 - force gauge
Calibration certificate	3140067	MED02 - LARZEP force gauge
Calibration certificate	MTE-02-178	Caliper
Calibration certificate	SEA07008	Dial Gauge Micrometer
Calibration certificate	DYNAFOR EM-E08-006	Dinamometer
Calibration certificate	1606246	Scale
Assembly guide	---	Models 300 and 400

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Description of the inspections carried out :

1. Health and safety comments

People used the safety boots, ear plugs and safety glasses. In the facilities exit routes, fire extinguishers and alarm signals are well placed and visible with no obstacles to stops its used if necessary.

2. Manufacturing Progress Status (Quantities)

BV Inspector verified that the scaffolds were assembled according to the drawings provided by Alufase, which were only general overall drawings of the assembled scaffolds. Detailed drawings of components (platforms, casters, fittings, etc...) were available but not used for this inspection.

3. Details of inspection activities carried out with respect to scope of work

OBJECTIVE

The purpose of this report is to describe the tests performed on the aluminum scaffolds of ALUFASE brand to compare with some requirements found in the OSHA Standards and in the ANSI and UNE-EN standard.

These tests were performed on days 14, 15, 16 June 2016 and 16, 20 January 2017 at the facilities of ALUFASE, S.A. at Ctra M-114, Km 1 Ajalvir (Madrid) - Spain.

Day of inspection	Test performed
14 June 2016	MODEL 300, Length 2.50m (8.20ft), simple width 0.74m (2.43ft) MODEL 300, Length 3.05m (10ft), simple width 0.74m (2.43ft)
15 June 2016	MODEL 300, Length 1.12m (3.67ft), simple width 0.74m (2.43ft) MODEL 300, Length 1.91m (6.27ft), simple width 0.74m (2.43ft)

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16 June 2016	Component testing: Platforms, Guardrail, Toeboard, Handrail
16 January 2017	<i>MODEL 300 Aluspeed, Length 1.91m (6.27ft), simple width 0.74m (2.43ft)</i> Component testing: Casters, Screwjacks, Toeboards
20 January 2017	Component testing: Frames, Connections

DESCRIPTION OF SCAFFOLDS

BV Test Certificate No. CER-51/EK2/06/0006, dated 22-Feb-2006, by BV Inspector Sergio Tomás Gómez indicates that these scaffolds (Model 300) are Load Class 3, meaning a uniformly distributed load of 2,000 N/m² (41.8 lbm/ft²), according to UNE-EN 1004:2006 Table 1. Alufase also indicated that they are intended for maximum height of 8 m (26.2 ft) outdoors and 12 m (39.4 ft) indoors. They have vertical ladder access, meaning access type D according to UNE-EN 1004:2006 clause 7.6.1.

The scaffolds are made primarily of aluminum alloy members, and there are various configurations possible. The structure is formed by aluminum tubes, joined together with cast aluminum fittings and cold forming. The configurations actually witnessed are described in the below, where the “Height” is measured from the ground to the walking surface of the platform.

MODEL	DRAWING	Height
<i>MODEL 300, Length 1.12m (3.67ft), simple width 0.74m (2.43ft)</i>	4AS112 rev.1	157,48”
<i>MODEL 300, Length 1.91m (6.27ft), simple width 0.74m (2.43ft)</i>	4AS191 rev.1	157,48”
<i>MODEL 300 Aluspeed, Length 1.91m (6.27ft), simple width 0.74m (2.43ft)</i>	Aluspeed rev.1	78.74”
<i>MODEL 300, Length 2.50m (8.20ft), simple width 0.74m (2.43ft)</i>	4AS250 rev.1	157,48”
<i>MODEL 300, Length 3.05m (10ft), simple width 0.74m (2.43ft)</i>	4AS305 rev.1	157,48”

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Alufase has indicated that, in all cases, they intend to limit the height to base ratio to a maximum 3:1, in order to comply with ANSI A10.8 paragraph 4.35.

BACKGROUND

This “Background” section is a portion of the BV Inspection Report No. 51/EK2/06/0006-INF Rev.01, dated 22-Feb-2006, which reports testing witnessed by BV Inspector Sergio Tomás Gómez, on components of the scaffolds and on the completely assembled structure. That report did not have any reference to OSHA standards, so some commentary was added to compare with text in OSHA standards.

Brake

The brake can only be unlocked by deliberate action on it, which addresses the requirement of OSHA Standard 1926.452 (w) (2).

To verify the effectiveness of the brake, five casters of each type were load tested, applying a horizontal load of 0.30 kN (67 lbs) to the vertical axis of rotation of the wheel, in the rolling direction, while at the same time applying a vertical load. The vertical load was 1.25 kN (337 lbs) on the 125x40 and 150x45 casters. The vertical load was 1.86 kN on the 200x50 casters.

No rotation was observed in any of the fifteen tests conducted.



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Platforms

Platforms tested had the following dimensions:

- 2.94 m x 0.61 m (1.79 m²) (19.30 ft²)
- 1.80 m x 0.61 m (1.10 m²) (11.82 ft²)

Load testing: The platforms were subjected to the following loads:

- Load uniformly distributed over the floor: 2 kN/m² (41.8 lbf/ft²)
- Load concentrated over an area of 500mm x 500mm (1.64ft x 1.64ft): 1.5 kN (337 lbf)
- Load concentrated over an area of 200mm x 200mm (0.66ft x 0.66ft): 1.0 kN (225 lbf)

During all these platform tests, the deflection observed was less than 1/60th of the platform length, which addresses the requirements of OSHA standard 1926.451(f)(16) and ANSI A10.8 paragraph 5.2.2.

Toe boards

OSHA standard 1926.451(h)(4)(ii) requires that toeboards be at least 3.5 inches (9 cm) high from the top edge of the toeboard to the level of the walking/working surface, and that they have no more than 1/4 inch (0.7 cm) clearance above the walking/working surface. The dimensions were verified satisfactorily.

Horizontal load test: One toeboard was selected randomly by Alufase, of 3.05 m (10 ft) in length and 150 mm (5.9 in) in height. Over an area of 45cm x 15cm (1.48ft x 0.49ft) in the center of the board, a horizontal load of 0.15 kN (34 lb) was applied. The worst deflection obtained was 32 mm (1.26 in).



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Guardrail

Guardrails are made of aluminum tubing 1.992 in x 0.059 in wall, which is acceptable according to ANSI 10.8-2001 §4.6.4(3), and to OSHA standard 1926.451 Subpart L Appendix A § 1(d)(i).

Dimensional Control: The toprail is at a height of 1 m (39 in) above the level of the working surface. The handrail is such that the distance between the toprail and the midrail is a less than 470 mm (18.5in), with an actual value of 320mm (12.6 in). Also, between the midrail and the top of the toeboard, there is a distance of less than 470 mm (18.5 in), with and actual value of 390mm (15.4 in). The distance between the outer face of the toeboard and the inner face of the handrail is less than 80 mm (3.1 in), with an actual value of 58 mm (2.3 in). Additionally, the crossbracing was measured, with the crossing point of the two braces being at a height of 0.97 m (38 in), and the end points at each upright being at 0.81 m (32 in) apart. These dimensions are according to the requirements of OSHA Standard 1926.451(g)(4)(ii) and 1926.451(g)(4)(xv), and ANSI A10.8 paragraphs 4.6.5 and 4.6.6.

Vertical load: Alufase randomly selected a guardrail 3.05 m (10 ft) long. A point load of 1.25 kN (281 lbm) was applied on each of the two rails of the guardrail (in two different test), over a length of 180 mm (7.09 in), with the intention of simulating footprint, and applied in the middle of the guardrail. No breaking or disconnection was observed.

Horizontal load: On the same guardrail, a horizontal point load of 0.30 kN (67 lbm) was applied to each of the two rails of the handrail (in two different test), over a length of 180 mm (7.09 in), with the intention of simulating footprint, and applied in

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the middle of the guardrail. The most unfavorable deflection obtained was 30 mm (1.18 in).

This guardrail testing was done to address the requirements of OSHA Standard 1926.451(g)(1)(iv), 1926.451(g)(4)(vii), 1926.451(g)(4)(ix), and ANSI A10.8 paragraph 4.6.4.

Ladders (sides of scaffold frames)

Dimensional control: the height of first step depends on the diameter of the casters and the extension of the adjustable legs. The height of the first step without extending the legs is:

270mm (10.6in) with casters of diameter 125mm (4.92in)

310mm (12.2in) with casters of diameter 150mm (5.91in)

370mm (14.6in) with casters of diameter 200mm (7.87in)

Connections between vertical tubular members

Once the connections are assembled, the top cannot be disconnected until it has been raised more than 150 mm (5.9 in). Connection pins are provided to prevent the top being lifted accidentally.

Dimensional Control: The difference in diameters between the mating vertical members is of 1.5mm (0.06 in).



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WITNESSED TESTS ON COMPONENTS

This section summarizes testing witnessed in 2016 and 2017 by BV Inspector Sergio Borrás, on components of the scaffolds (not the completely assembled structure).

Casters

Alufase intends the scaffolds to be fitted with three types of casters with rubber tires, brand "Wicke GMBH", of the following sizes:

- Diameter 125 mm x 40 mm (5" x 1.6")
- Diameter 150 mm x 45 mm (6" x 1.8")
- Diameter 200 mm x 50 mm (8" x 2")

ANSI A10.8 §11.2.2 requires minimum wheel diameter of 5 inches. The casters are attached to the scaffold by a threaded element with locking system to prevent them from accidentally falling out.

ANSI A10.8 §11.2.1 requires casters to be designed to support four times the design working load. Alufase indicated that the worst case loading of a scaffold is calculated by adding 1,560 lbm (maximum allowed payload) and 1,280 lbm (weight of the scaffold), which equals 2,840 lbm. This worst case multiplied by 4 equals 11,360 lbm, and then this is divided by 4 to calculate the test load for a single caster. Therefore, 2840 lbm (12.6 kN) was the actual test load applied to each caster. See photograph n° 47 & 48, which show this test.



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Screwjacks

According to paragraph 11.1.4 of ANSI A10.8-2001 for height adjustments, at least 6 inches of the screwjacks shall be in the scaffold leg, and no more than 12 inches of the screwjack shall extend between the top of the nut and the top of the caster.

The actual measurements were 6 inches and 12 inches respectively, see photograph 49 & 50.

Platforms

The platforms are made of elements such as plywood and aluminum, and have a slip-resistant surface coating.

Platforms tested had the following dimensions:

Platform 3.05m (10ft) → 2.93m x 0.606m (1.776m² / 19.11ft²)

Platform 2.50m (8.20ft) → 2.38m x 0.606m (1.441m² / 15.50ft²)

Platform 1.91m (6.27ft) → 1.79m x 0.606m (1.087m² / 11.7ft²)

Platform 1.12m (3.67ft) → 1m x 0.606m (0.606m² / 6.52ft²)

OSHA standard 1926.451(b)(2) requires that each scaffold platform be at least 18 inches (46 cm) wide. All platforms above have a width greater than this.

Dimensional Control: The access door of the platform has dimensions of 48.5cm wide x 60.5cm long (1.59ft x 1.98ft).

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See attached the MSDS of the fabricated scaffold deck plywood used in this kind of scaffold.

Frames

The frames of Alufase's model 300 scaffolds act as ladders for access and have the following dimensions:

The space between rungs is 300 mm (11.81 in), which is less than the maximum 16-3/4 inches (43 cm) allowed by OSHA standard 1926.451(e)(6)(vi) and by ANSI A10.8 §4.19(2). ANSI A10.8 §4.20 requires that the distance from the supporting surface to the first step of a ladder or frame designed to be climbed shall not exceed 2 ft. This distance in the Alufase scaffolds is actually 14.6 inches when the screwjacks are completely extended.

Rung diameter is 50.6mm (1.99in), and length varies from 24 inches to 49 inches.

The steps have anti-slip surface by design.

Alufase intends to address the requirements of OSHA standard 1926.452(w)(1) in their design, which includes 2" aluminum tubing diagonals connecting the fabricated frame components.

WITNESSED TESTS ON COMPLETE STRUCTURE

This section reports testing that was witnessed in 2016 & 2017 by BV Inspector Sergio Borrás.

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Determination of Vertical Load

OSHA Standard 1926 Subpart L, Appendix A § 1(c) defines the maximum rated load capacity for fabricated platforms as follows (applied uniformly over the entire span area):

- Light-duty: 25 pounds per square foot (converted to 122.1 kg/m², or 1,192 N/m²)
- Medium-duty: 50 pounds per square foot (converted to 244.1 kg/m², or 2,394 N/m²)
- Heavy-duty: 75 pounds per square foot (converted to 366.2 kg/m², or 3,591 N/m²)

Manufacturer considers the above “pounds” to mean pound-mass (unit of mass). The following table, for each scaffold, shows the area of the platform, the calculated test load, and the allowable deflection under the load.

The “Calculated Platform Load” is the above OSHA rated load capacity times the area of the platform. That is then multiplied by 4 to determine the “Calculated Total Load”. This is because OSHA 1910.28(a)(4) states “shall be capable of supporting without failure at least four times the maximum intended load”.

According to OSHA standard 1926.451(f)(16), “Platforms shall not deflect more than 1/60 of the span when loaded.” The “Allowable Deflection” below calculated by dividing the length of the platform by 60.



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Scaffold Drawing	Platform Dimensions	Platform Surface Area	Duty	Calculated Platform Load	Calculated Total Load	Allowable Deflection
Length m (ft)	m (ft)	m² (ft²)	Load kg/m² (lbm/ft²)	kg	kg (lbm)	(Length/60) mm (in)
4AS305 3.05 (10)	0.606x2.930 (1.988x9.613)	1.776 (19.11)	Light 122.1 (25)	216.7	867 (1911)	49 (1.92)
4AS250 2.50 (8.2)	0.606x2.378 (1.988x7.802)	1.441 (15.50)	Light 122.1 (25)	177.9	704 (1551)	40 (1.56)
4AS191 & Aluspeed 1.91 (6.27)	0.606x1.794 (1.988x5.886)	1.087 (11.70)	Heavy 366.2 (75)	398.1	1592 (3511)	30 (1.18)
4AS112 1.12 (3.67)	0.606x1.000 (1.988x3.281)	0.606 (6.52)	Heavy 366.2 (75)	221.9	888/1957	17 (0.66)

Vertical load tests

To apply the test loads, Alufase used concrete blocks of 255 kg (562 lbm), lead bars of 45kg (99.2 lbm) and iron bars of 30 kg (66.1 lbm). These masses were weighed with a calibrated scale (weighing machine) before the testing, under witness of BV Inspector (see photo# 2). Since there is no test procedure, the test masses were placed on the platforms in different configurations decided by Alufase (see, for example, picture 7, 12, 17, and 20), even though they did not represent a completely uniform distribution of the load over the entire span area.

In order to measure the deflection, Alufase added a horizontal member underneath the platform, to which the dial gauge was attached (see, for example, pictures 6, 7,

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12, 14, 19 & 21). This additional horizontal member is not part of the assembly shown in the drawings.

Shown below a comparative table with the “Real” test loads applied and the corresponding deflection measured:

Platform Length (m)		Load kg (lbs)	Deflection mm (in)
3.05	Theory	Light 848 (1870)	49 (1.92)
	Real	855 (1885)	38 (1.50)
2.5	Theory	Light 728 (1605)	40 (1.56)
	Real	750 (1653)	24 (0.94)
1.91	Theory	Heavy 1560 (3440)	30 (1.18)
	Real	1590 (3505)	12 (0.47)
1.91 Aluspeed	Theory	Heavy 1560 (3440)	30 (1.18)
	Real	1590 (3505)	12 (0.47)
1.12	Theory	Heavy 870 (1918)	17 (0.66)
	Real	870 (1918)	5.7 (0.22)

All the scaffolds withstood the test load without any observed breakage and without any significant observed deformations or disconnections.

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Diagonal member load tests

OSHA Standard 1926.451(g)(1)(iv) requires a guardrail system with minimum 200 pound toprail capacity. 1926.451(g)(4)(vii) requires that each toprail or equivalent member of a guardrail system be capable of withstanding a force of at least 200 pounds, applied in any downward or horizontal direction at any point along its top edge. 1926.451(g)(4)(ix) requires that midrails, intermediate vertical members, and equivalent structural members of a guardrail system be capable of withstanding a force of at least 150 pounds applied in any downward or horizontal direction at any point along the member. ANSI A10.8 paragraph 4.6.4 states a requirement for a 200-pound force applied in any outward or downward direction, to be withstood without failure.

Alufase decided to perform a test related to the above requirements, to a diagonal member of the scaffolds, because OSHA Standard 1926.451(g)(4)(xv) states that crossbracing is acceptable in place of a midrail or toprail under certain conditions (see pictures 29 & 30). A diagonal member was randomly selected by Alufase, of Lot# 619, length 3.16m (10.36 ft) and diameter 50.6mm (1.99 in). It was installed on a scaffold, similar to drawing 4AS305, at the bottom of the scaffold. A perpendicular horizontal load of 94.2 kg (208 lbm) was applied to the middle of it. No significant deformation was observed.

Toeboard test

OSHA Standard 1926.451(h)(4)(i) requires toeboards to be able to withstand a force of at least 50 pounds, applied in any downward or horizontal direction, at any point on the toeboard. ANSI A10.8 paragraph 4.6.3 states a requirement for a force of 50 pounds applied in an outward direction, to be withstood without failure.

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The Alufase Toeboards are made of plywood. One toeboard was selected randomly by Alufase, of 3.05 m (10 ft) in length, 150 mm (5.9 in) height and 12 mm (0.47 in) thickness. It was installed onto a scaffold according to Alufase's design, and the loads were applied to the center of the Toeboard (see pictures # 31 through 36). A downward load of 32 kg (71 lb) was applied by itself, and no breaking or permanent deformations were observed. Separately, a perpendicular horizontal load of 29.2 kg (64 lb) was applied by itself, and no breaking or permanent deformations were observed.

Guardrail test

Same requirements are considered as in the "Diagonal member load test" section above, per OSHA Standard 1926.451(g)(1)(iv), 1926.451(g)(4)(vii), 1926.451(g)(4)(ix), and ANSI A10.8 paragraph 4.6.4.

A guardrail was selected by Alufase, comprised of a toprail and a midrail joined by 2 horizontal members. All those members are made of aluminum tubing. The length was 3.05 m (10 ft). Alufase installed the guardrail in the scaffold, and the height of the top rail was 0.97 m (3.18 ft) above the platform walking surface. The height of the midrail was 0.57 m (1.87 ft) above the platform walking surface. See pictures # 37 through 42.

The guardrail was then removed from its position at the top of the scaffold, and installed onto a lower height section of the scaffold (see picture # 40). A perpendicular horizontal load of 95 kg (209 lb) was applied to the toprail, and no breaking or permanent deformations were observed. Separately, a perpendicular horizontal load of 70 kg (154 lb) was applied to the midrail, and no breaking or permanent deformations were observed.

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Platform Test for Person-Loading

ANSI A10.8 paragraph 5.1.2.2 requires platforms to be designed and constructed to carry the following loads:

- Platforms rated for one-person capacity: 250 pounds (113 kg) placed in the center of the span.
- Platforms rated for two-person capacity: 250 pounds placed 18 in to the left of the centerline of the span, and 250 pounds placed 18 in to the right of the centerline of the span, for a total load of 500 pounds (227 kg).

Two tests were performed, one for each of the above ratings, on the platform of the scaffold of 3.05 m (10 ft) length. For the first test, a load of 120 kg (26 lbm) was placed in the middle of platform. For the second test, a load of 120 kg was placed 18 inches to the left of the of the centerline of the span, and another 120 kg load was placed 18 inches to the right of the centerline, for a total load of 240 kg (529 lbm), simulating two persons. Alufase indicated that the maximum allowed load for this platform is 250 ksg (551 lbm), meaning that three persons are not allowed. No breaking or permanent deformations were detected during the tests. See photographs n° 43 & 44.

4. Results of Inspection

The testing described above was witnessed by the BV Inspector.

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Digital Pictures



1. General view Mod. 300 length 2.5m (8.20ft)
 width 0.74m (2.43ft)

2. Load unit



3. Casters 200x50 (7.87x1.97in)



4. Platform locker view

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5. Union detail



6. Dial gauge position



7. Complete light load (750Kg / 1654lbs)



8. Measure with load (24mm / 0.944in)

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9. General view **Mod. 300 length 3.05m (10ft) width 0.74m (2.43ft)**



10. Model check



11. Lot mark



12. Complete light load (855Kg / 1885lbs)

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13. Measure with load (38mm / 1.5in)



14. Measure after load (0mm / 0in)



15. General view **Mod. 300** length **1.91m (6.27ft)** width **0.74m (2.43ft)**



16. Model check

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17. Complete heavy load (1590Kg / 3505lbs)



18. Measure with load (23.5mm / 0.925in)



19. General view **Mod. 300 Aluspeed length 1.91m (6.27ft) width 0.74m (2.43ft)**



20. Heavy load view (1590Kg / 3505lbs)

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21. Measure with load



22. Measure with load (17mm / 0.67in)



23. General view **Mod. 300 length 1.12m (3.67ft) width 0.74m (2.43ft)**



24. Model check

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25. Measure before load (0mm / 0in)



26. Position of test load



27. Complete heavy load (870Kg / 1918lbs)



28. Measure with load (5.70mm / 0.224in)

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29. Diagonal test



30. Diagonal test (94.2Kg / 207.76lbs)



31. Toeboard test



32. Dimensional measure (150mm / 5.91in)

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33. Horizontal load at toeboard



34. Measure of horizontal load (29.2Kg / 64.37lbs)



35. Vertical load at toeboard



36. Measure of vertical load (32Kg / 70.56lbs)

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37. Handrail test



38. Height of top rail (0.97m / 38.18in)



39. Height of midrail



40. Horizontal load at handrail

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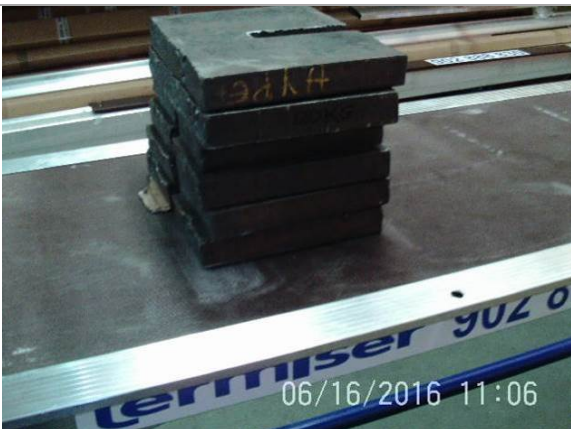
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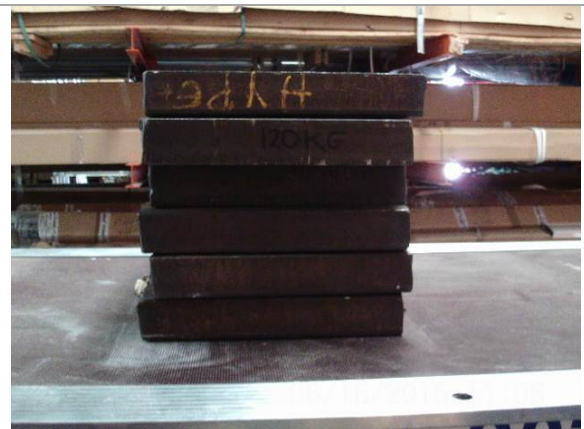
41. Measure of horizontal load at toprail (95Kg / 209.47lbs)



42. Measure of horizontal load at midrail (70Kg / 154.35lbs)



43. Load per person test



44. Load per person (120Kg / 264.6lbs)

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45. Calibration of dial gauge



46. Calibration of dynamometer



47. Caster test



48. Caster load test (16.95kN)

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49. Screwjacks measure (inside part)



50. Screwjacks measure (extended part)

END OF REPORT

<p>Inspected by: Name: Sergio Borrás</p> <p>Signature: </p> 	<p>Checked by: Name: José María Pérez</p> <p>Signature: </p>
<p>Inspection Office: BV Madrid (SPAIN)</p>	<p>Supervision during performance <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes</p>
	<p>Reviewed by: Name: Juan Rodriguez</p> <p>Signature: </p>  <p>Office: Industry Technical Center, Houston, TX. Bureau Veritas North America.</p>

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