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CUPA PIZARRAS
TEST REPORT

SCOPE OF WORK
STRUCTURAL TESTING ON 201 VANGUARD, NATURAL SLATE

REPORT NUMBER
H7897.02-109-44

TEST DATE(S)
11/09/17

ISSUE DATE
12/19/17

RECORD RETENTION END DATE
11/09/21

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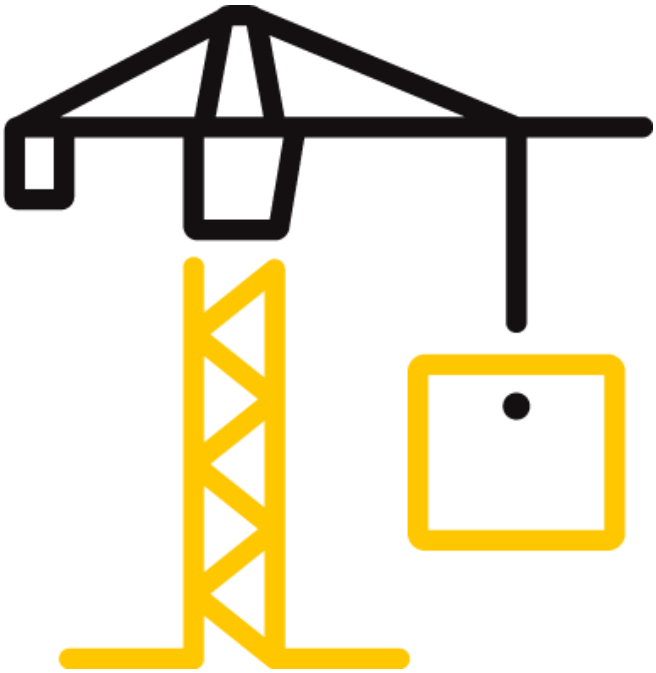

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TEST REPORT FOR CUPA PIZARRAS

Report No.: H7897.02-109-44
Date: 12/19/17

REPORT ISSUED TO

CUPA PIZARRAS
La Medua s/n
32330 Sobradelo de Valdeorras (Ourense)
SPAIN

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Cupa Pizarras, La Medua s/n 32330 Sobradelo de Valdeorras (Ourense), SPAIN to perform testing in accordance with ASTM E330/E330M-14**,** *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*, on their Vanguard, Natural Slate. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at Intertek B&C test facility in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
Ultimate Positive Design Pressure	±4800 Pa (±100.25 psf)
Ultimate Negative Design Pressure	±4800 Pa (±100.25 psf)

For INTERTEK B&C:

COMPLETED BY:	Robert J. Beatty	**REVIEWED BY:**	Timothy J. McGill
TITLE:	Technician III – Product Testing	**TITLE:**	Manager – Product Testing
SIGNATURE:	Digitally Signed by: Robert Beatty	**SIGNATURE:**	Digitally Signed by: Timothy J. McGill
DATE:	12/19/17	**DATE:**	12/19/17

RJB:abo

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SECTION 3
TEST METHOD(S)

The specimen was evaluated in with the following:

> **ASTM E330/E330M-14**, *Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of two years from the test completion date.

The specimen was installed onto a 16 gauge 2x6 steel stud wall with studs spaced 24" on center and 1/2" densglass sheathing. Installation of the tested product was performed by the client.

Installation:
Vertical extruded aluminum battens were first attached to each stud of the test buck by means of 4-3/4" long aluminum angle brackets measuring 4" by 1-5/8". The brackets were secured with #15 x 2" long self-drilling pan head screws spaced at 39" on center through the densglass into the stud. Horizontal extruded aluminum battens were then attached to the vertical battens and secured with #12 x 1" self-drilling hex head screws spaced 24" on center into each of the vertical battens. The slate tiles were then installed onto the horizontal battens with two 9/16" wide by 2-7/16" long by 0.53" thick stainless steel clips per tile. Two #12 x 1" self-drilling flat head screws per tile were utilized to secure the top course. Nine courses were utilized to cover the test buck with each row offset from the one below.

SECTION 5
EQUIPMENT

Control Panel – 005644
Transducers – INT00153, INT00142, 65989, INT00145, INT00146

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Nick Wilkus	Cupa Pizarras
Timothy J. McGill	Intertek B&C
Robert J. Beatty	Intertek B&C

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SECTION 7
TEST SPECIMEN DESCRIPTION

Product Type: Natural Slate
Series/Model: 201 Vanguard

Product Size(s):

OVERALL AREA:	**WIDTH**		**HEIGHT**	
5.9 m² (64.0 ft²)	**millimeters**	**inches**	**millimeters**	**inches**
Overall size	2438	96	2438	96
Tile size	599	23-9/16	302	11-7/8

Tile Construction:

TILE MEMBER	**MATERIAL**	**DESCRIPTION**
Tile	Hand quarried natural slate	Maximum thickness 0.295", minimum thickness 0.229"

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SECTION 8
TEST RESULTS

Upon completion of the loading sequence of the panel specimen, there were no component failures.

The temperature during testing ranged from 15°C (59°F) to 16°C (60°F). The results are tabulated as follows:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Uniform Load Deflection, per ASTM E330 Deflections taken at the width of one natural slate +4800 Pa (+100.25 psf) -4800 Pa (-100.25 psf)	 1.8 mm (0.07") 0.5 mm (0.02")	Report only	1, 2
Uniform Load Deflection, per ASTM E330 Deflections taken at the width of the entire specimen +4800 Pa (+100.25 psf) -4800 Pa (-100.25 psf)	 21.8 mm (0.86") 33.5 mm (1.32")	Report only	1, 2
Uniform Load Structural, per ASTM E330 Permanent sets taken at the width of one natural slate +4800 Pa (+100.25 psf) -4800 Pa (-100.25 psf)	 1.3 mm (0.05") 0.8 mm (0.03")	Report only	1, 2
Uniform Load Structural, per ASTM E330 Permanent sets taken at the width of the entire specimen +4800 Pa (+100.25 psf) -4800 Pa (-100.25 psf)	 5.6 mm (0.22") 7.1 mm (0.28")	Report only	1, 2

***General Note**: All testing was performed in accordance with the referenced standard(s).*

Note 1: Loads were held for 10 seconds.

Note 2: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

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SECTION 9
PHOTOGRAPHS

Photo No. 1
Test Specimen

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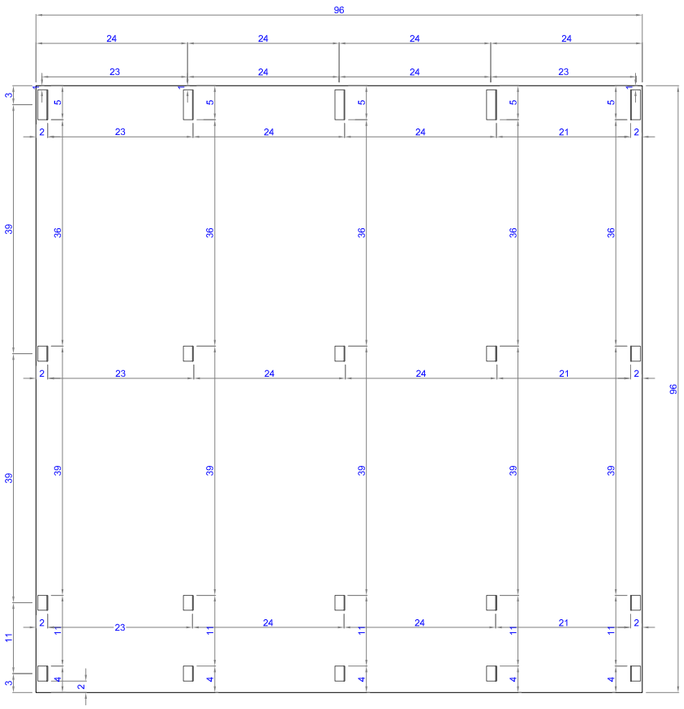
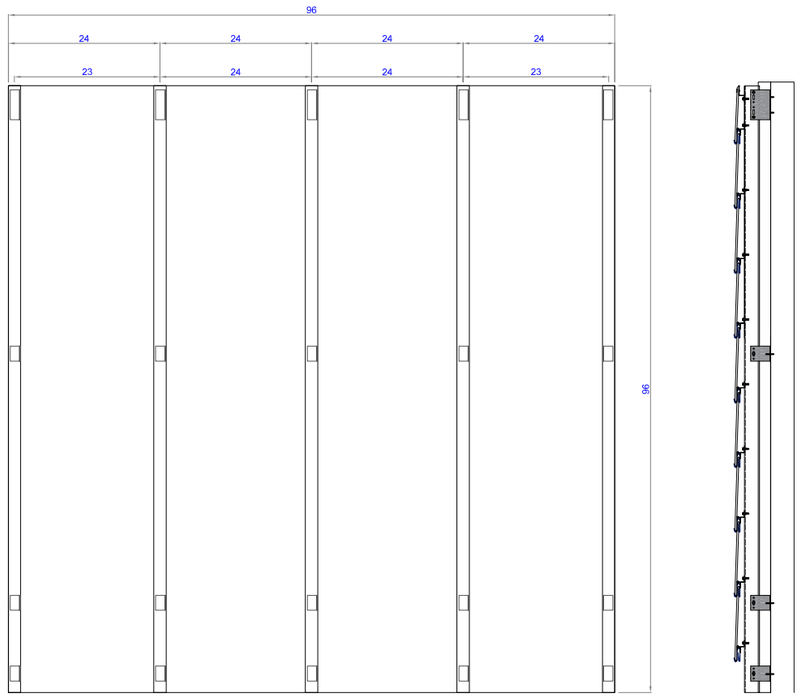
SECTION 10
DRAWINGS

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

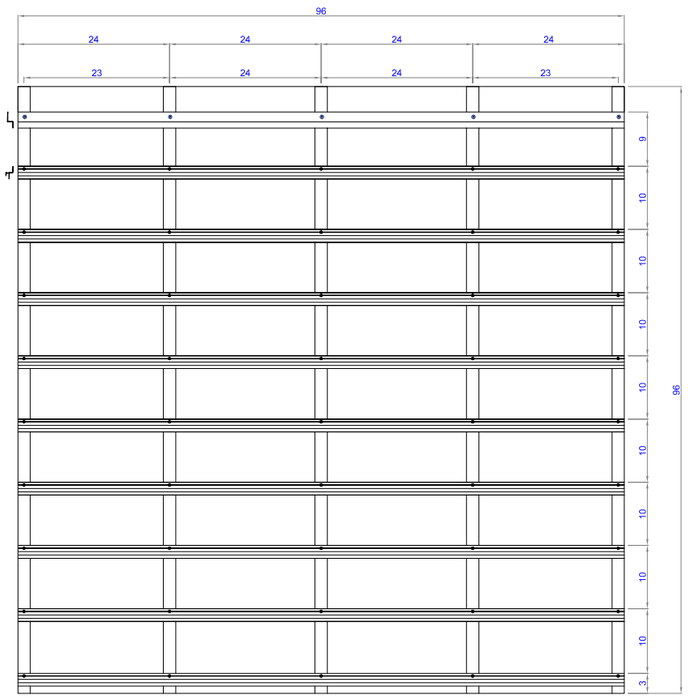
BRACKETS
-**5** fixed point
-**15** sliding point



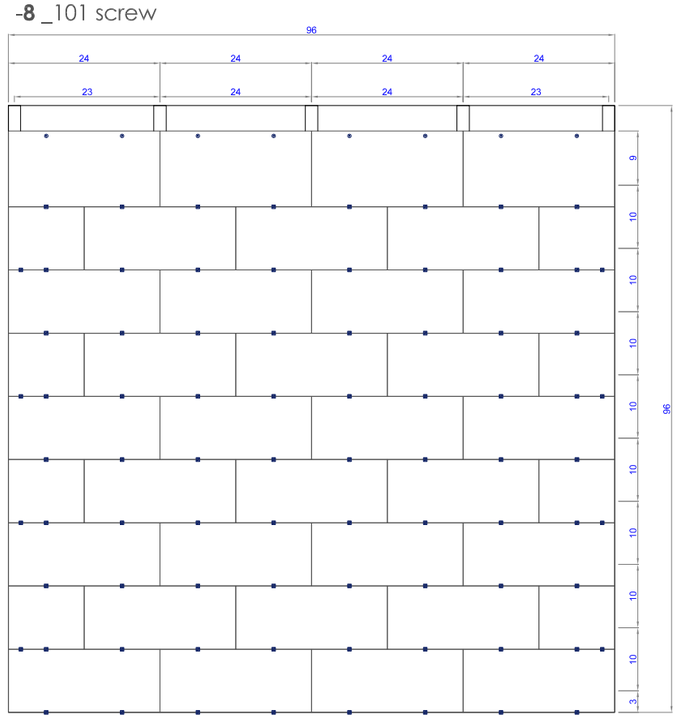
VERTICAL PROFILE
-**5** units "L" profile_40 lf (3 profile 217")



HORIZONTAL PROFILE
-**9** _201 horizontal profile (72lf)_**4** profiles 217"
-**1** _201 top profile (8lf)_**1** profile 217"



SLATE
-**40** units (24"x12")
-**80** clips
-**8** _101 screw



CUPACLAD_201 VANGUARD

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SECTION 11
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	12/19/17	N/A	Original Report Issue