Architectural Testing

PERFORMANCE TEST REPORT SUMMARY

Rendered to:

AVENERE CLADDING LLC
2801 Sisson Street
Baltimore, Maryland 21211-2902

Report No.: 77673.01-109-44
ASTM E283, E330, E331. AAMA 501.1

Product: NeaCera® Terra-Cotta Wall Panels

Project Summary: Architectural Testing, Inc. was contracted by Avenere Cladding LLC to perform testing on a Series/Model NeaCera, terra-cotta exterior wall cladding system. ATI certifies the results of the described test specimen in accordance with the following test methods required by ASTM and AAMA, respectively. Test specimen description and results are reported herein. The sample was provided by the client.

Test Methods: The test specimen was evaluated in accordance with the following:

ASTM E 283-04, *Test Method for Determining Rate of Airflow Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.*

ASTM E 330-02, *Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.*

ASTM E 331-00, *Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.*

AAMA 501.1-05, *Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure.*

Test Title	Summary of Results
ASTM E283Air Infiltration	Passed with <0.01 cfm/ft^2
ASTM E330 Uniform Load Deflection Test Pressure	Passed @ ±40.0 psf
ASTM E330 Uniform Load Structural Test Pressure	Passed @ ±60.0 psf
ASTM E331 Water Resistance Test Pressure	15.0 psf No Leakage
AAMA 501.1 Dynamic Water Resistance	12.0 psf No Leakage

Test Specimen Description:

Wall Construction: The wall was constructed of 18 gauge (0.045") steel studs spaced 24" on center with a horizontal brace at the midspan that was welded to the studs. 5/8" thick Dens Glass Gold™ was secured to the studs with #6 x 1-1/4" long self-tapping screws, spaced 8" on center at the perimeter, 12" on center at each stud, and 6" on center at the horizontal stud brace where the two pieces butt together. The Dens Glass Gold™ was wrapped with DuPont's Tyvek™ CommericalWrap® wrap. The CommercialWrap® was secured through the Dens Glass Gold™ into the steel studs with Dupont Wrap Cap Screws (i.e. 2" long screws with 2" diameter plastic washers) spaced 12" on center at each stud. All screw penetration points for the ADS Wall Brackets were covered/sealed with 4" x 4" patches of DuPont StraightFlash™ . Extruded aluminum ADS Wall Brackets, located at each end and spaced 24" on center, were utilized to secure the sub-girt. Each ADS Wall Bracket was secured to the wall with one #12 x 2" long self-tapping screw and the ADS Sub-girt was secured to each ADS Wall Bracket with two #10 x 5/8" long self-tapping screws. The ADS Sub-girts were located 6" from the top and bottom and 28" on center. ADS Vertical Profile pieces with an insert were located 2" from each end and one at the midspan and were secured to each ADS Sub-girt with two #10 x 5/8" long self-tapping screws. The terra-cotta panels hooked into the ADS Vertical Profile pieces.

Panel Construction: The panels were constructed of terra-cotta and utilized a male interlock along the bottom edge and a female interlock along the top edge. The backside of the panels utilized five continuous horizontal rows of male interlocks/strengthening ribs.

Test Results:

Test Method	Title of Test	Results
ASTM E 283	Air Infiltration	
	1.57 psf	<0.01 cfm/ft^2
	6.24 psf	<0.01 cfm/ft^2
	12.48 psf	<0.01 cfm/ft^2
ASTM E 330	Uniform Load Deflection	
	(Deflections reported were taken on the middle of a panel)	
	(Loads were held for 10 seconds)	
	40.0 psf (positive)	0.09"
	40.0 psf (negative)	0.03"
ASTM E 330	Uniform Load Structural	
	(Permanent sets reported were taken on the middle of the panel)	
	(Loads were held for 10 seconds)	
	60.0 psf (positive)	0.01"
	60.0 psf (negative)	<0.01"
ASTM E 331	Water Resistance	
	15.0 psf	No leakage
AAMA 501.1	Dynamic Water Resistance	
	12.0 psf	No leakage

***General Note**: All testing was performed in accordance with the referenced standards.*