



Table 1 Performance Test of Terracotta Panel

Project		Performance Requirements and Instructions	Spec.	Inspection Standard
Surface Quality		Refer to Table 2	Whole Panel	GB/T27972-2011 ASTM C67
Deviation of Dimension & Shape		Refer to Table 3		
Water Absorption %		$0.5\% < E \leq 10\%$		
Frost Resistance		After 100 times no cracks and spalling		
Thermal Shock Resistance		After 10 times of no crack and explosion		
Stain Resistance		No less than 3 level		
Ratio of Wet Expansion		$\leq 0.6\text{mm/m}$		GB/T4100-2015
Ratio of Thermal Expansion		$\leq 6 \times 10^{-6}$		
Abrasive Resistance		$\leq 275\text{mm}^3$		
Impact Resistance		Reporting recovery system values		
Modulus of Rupture	Average Value	$\geq 20\text{MPa}$	ASTM C99	
Bending Strength	Average Value	$\geq 23\text{MPa}$	JG/T324-2011 ASTM 67	
Modulus of Elasticity		$\geq 20\text{GPa}$		
Poisson's Ratio		≥ 0.13	GB/T10294-2008	
Thermal Conductivity		$\leq 0.41\text{W/m.k}$		



Table 2 Surface Quality Requirements

Item	Quality Requirements
Front	No Cracking Allowed
	Not Allow $>1\text{mm}^2$ Spalling
Cracking on the Back	Not Allow $>5\text{mm}$
Colour Aberration	Not Obvious
The length of surface cracks should be less than 3mm since large aggregate particles, but does not affect the safety. Please note that glaze cracks decorative effect formed do not belong to surface cracks.	

**Table 3 Deviation of Dimension & Shape**

Unit: mm

Item	Contents	Tolerance
Length	Length of Extrusion Direction for Finished Plate	± 1.0
Width	Width of Finished Plate	± 2.0
Thickness	Thickness of Finished Plate	± 1.0
Depth of Hanging Notch	$\geq 6\text{mm}$	+2.0
Edge Straight ^a	The extent of deviation between long side and straight line (parallel to the direction of panel)	± 1.0
Edge Bending ^a	The extent of deviation between long side and straight line (perpendicular to the direction of panel)	± 1.0
Surface Roughness ^b	The extent of deviation between diagonal and straight line (perpendicular to the direction of panel)	± 1.0
Diagonal Difference	The difference of diagonal length	≤ 1.0

When the length of the terracotta panel is greater than 900mm, the allowable deviation of the straightness is determined by the Buyer and the Seller.

When the length of the terracotta panel is greater than 900mm, the allowable deviation of the surface roughness is determined by the Buyer and the Seller.

It does not require for the products with non planar or decorative concave-convex.

Test Method**1. Length, Width and Thickness of Terracotta Panel**

Test as per the size measurement method specified in GB/T27972-2011.

Measurement method: Keep bricks flat during measurement of length, width, thickness,



then measure with vernier caliper or tape, and accurate to 0.1mm.

2. Edge Straightness and Surface Smoothness

Test as per the test method specified in GB/T27972-2011.

Measurement method: Keep bricks flat during measurement of edge straightness and surface smoothness, then keep the Al-Alloy square pipe on the edge of bricks, measure the maximum gap under the straight bar by feeler.

3. Hanging Notch Depth

Test as per the size measurement method specified in GB/T27972-2011.

4. Surface Quality

Test as per the size measurement method specified in GB/T27972-2011.

5. Water Absorption Rate

Test as per the test method specified in GB/T27972-2011.

6. Bending Strength

Test as per the test method specified in JG/T324-2011.

7. Internal Defect

Visual sectional facial tissue of bricks, there are no abnormalities (layering, foreign matter, etc.) observed by breaking strength.

8. Sampling Method



Table 4 Product Inspection

No.	Inspection Item	Batch	Qty. (n)	Inspection Method	合格判断	Remarks	
1	Colour Aberration		100%	Sample Comparison by Visual Way	≥95% products no obvious defect in main area	Each Batch	
2	Stain						
3	Other Surface Defect						
4	Color		100%	Comparison with Customer's Panel	No obvious color aberration from vertical observation at 3m		
5	Length, Width, Hanging Notch		100%	Vernier Caliper or Tape	Allowable value as per Table 1 & Table 4		
6	Diagonal		20PCS	Vernier Caliper or Tape			
7	Roughness		20PCS	Dial gage			
8	Water Absorption		5PCS	Vacuum Water Absorption Apparatus	Within standard value		
9	Bending Strength		5PCS	Bending Tester			
10	Crack Check in Secret Place		All	Water Aqua	No		
11	Abrasive Resistance		5PCS	other company	Within standard value		type test
12	Ratio of Wet Expansion		5PCS	other company	Within standard value		type test
13	Ratio of Thermal Expansion		5PCS	other company	Within standard value		type test
14	Frost Resistance		5PCS	other company	Within standard value		type test
15	Stain Resistance		5PCS	other company	Within standard value		type test
16	Impact Resistance		5PCS	other company	Within standard value		type test
17	Poisson's Ratio		5PCS	other company	Within standard		type test



					value	
18	Modulus of Elasticity		5PCS	other company	Within standard value	type test
19	Thermal Conductivity		5PCS	other company	Within standard value	type test
20	Wooden	Materail	conformity			
21	Box	Size				
22	Indication	Marking	Correct and Clear			
23		Typeface、 Line Width				
24		Position	Proper Position			
25		Clarity	Distinct and Clear			
26	Packing Way	Conformity Certificate	Flat			
		Quantity	Right qty.			
27		Cushion Material	adequate			

Remarks:

- 1、 Item 1-10 & Item20-27 inspected and issued test report by CN factory.
- 2、 Item 11-16 inspected and issued test report by Yixing Branch of National Light Industry Quality Supervision and inspection center of ceramics.
- 3、 Item 17-19 inspected and issued test report by Shanghai Jianke Technical Assessment of Construction Co., Ltd.
- 4、 Batch: Regarding 1 model 1color and continuous production as 1 batch