Test report no. 094761.1 - Hv

ENGLISH VERSION

Principal	Argeton GmbH Oldenburger Allee 26 30659 Hannover
Date of commission	19.09.2009 - Herr Reitemeyer
Commission	Determining the dimensions and bending strength of ArGeTon-Terracotta Rainscreen Size l x b x h = 1500 x 400 x 30 mm (colour sand)

The test report covers five pages.

The testing material has been consumed.

In case of dispute, the original German version is decisive.

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1. Introduction

The MPA BAU HANNOVER was commissioned to determine the dimensions and surface quality according to DIN EN ISO 10545-2 and the bending strength according to DIN EN 538 for 10 ARGETON-rainscreen plates.

2. Delivery of test samples

Delivered on 11th November 2009 by the Principal:

- about 15 rainscreen plates, sand, l x b x d = 1500 x 400 x 30 mm

3. Test results

3.1 Determining the dimensions and surface quality

The test was carried out according to EN ISO 10545-2 on 10 rainscreen plates. The results are given in tables 2 to 4.

Table 2: Dimensions

sample	length			width			height					sample
no.	1	2	mean	no.	1	2	mean	no.	1	2	mean	no.
---	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
1	1491.0	1492.0	1491.5	416.2	416.1	416.2	29.4	29.2	29.4	29.4	29.4	25.4
2	1492.0	1491.5	1491.8	416.2	416.0	416.1	29.4	29.7	29.3	29.4	29.4	25.4
3	1492.0	1492.0	1492.0	416.0	414.6	415.3	29.5	29.5	29.5	29.6	29.5	25.6
4	1491.5	1492.0	1491.8	415.5	415.4	415.5	29.6	29.9	29.3	29.5	29.6	25.6
5	1492.0	1492.0	1492.0	415.9	415.6	415.7	29.6	29.7	29.3	29.5	29.5	25.6
6	1491.5	1491.5	1491.5	415.9	416.2	416.1	29.5	29.5	29.4	29.5	29.5	25.6
7	1492.0	1491.5	1491.8	416.4	416.2	416.3	29.6	29.8	29.5	29.6	29.6	25.6
8	1492.0	1492.0	1492.0	416.8	416.4	416.6	29.4	29.8	29.3	29.6	29.5	25.7
9	1492.0	1491.5	1491.8	416.4	416.1	416.3	29.7	29.6	29.6	29.4	29.6	25.6
10.	1492.0	1492.0	1492.0	416.6	415.9	416.2	29.4	29.8	29.5	29.6	29.5	25.7
Mittel	---	---	1491.8	---	---	416.0	---	---	---	---	29.5	25.6

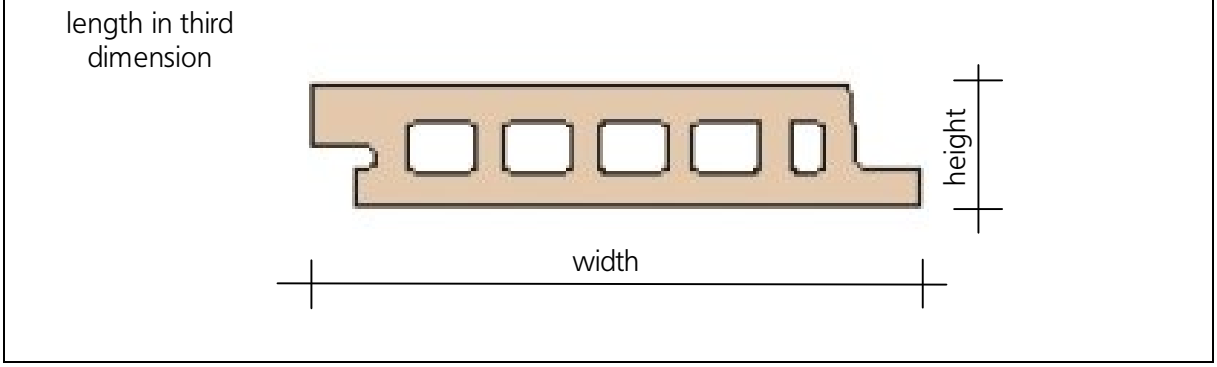
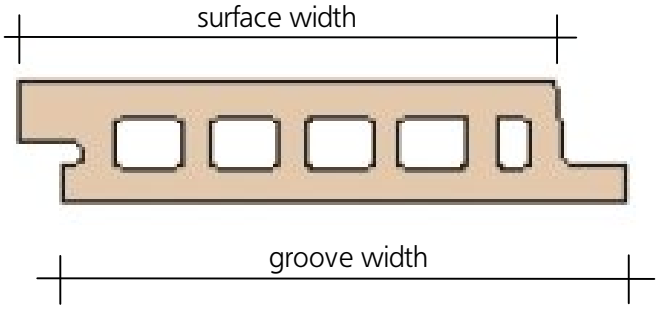


Table 2: dimensions (continued)

specimen	Groove width				Surface width			
Nno.	1	2	no.	1	2	no.	1	2
---	mm	mm	mm	mm	mm	mm	mm	mm
1	396.9	395.4	396.2	395.8	391.3	389.4	390.4	390.4
2	397.1	395.3	395.9	395.6	391.1	389.4	390.1	390.2
3	397.2	396.2	397.0	396.6	391.2	390.3	390.9	390.8
4	397.4	396.3	396.8	396.5	391.6	390.0	390.7	390.7
5	397.1	395.8	396.8	396.3	391.2	390.0	390.8	390.6
6	397.4	397.3	397.3	397.3	391.6	390.4	390.9	391.0
7	397.6	396.1	397.3	396.7	391.9	390.2	391.3	391.1
8	397.7	396.3	397.2	396.8	392.0	390.5	391.2	391.2
9	397.6	396.2	397.0	396.6	391.8	390.4	391.3	391.1
10	397.7	396.3	397.0	396.6	391.9	390.5	391.3	391.2
Mittel	---	---	---	396.5	---	---	---	390.8



spec.	upper side			lower side			thickness of stays		
no.	1	2	mean	Nr.	1	2	mean	Nr.	1
---	mm	mm	mm	mm	mm	mm	mm	mm	mm
1	7.0	6.9	6.9	7.6	7.9	7.7	8.3	9.2	8.8
2	7.0	6.8	6.9	8.4	8.2	8.3	8.2	10.2	9.2
3	7.1	7.5	7.3	8.0	7.7	7.8	8.5	10.3	9.4
4	7.0	7.6	7.3	8.1	8.1	8.1	8.2	10.2	9.2
5	7.0	6.7	6.8	8.1	8.0	8.0	8.2	10.2	9.2
6	7.0	7.5	7.2	8.2	8.5	8.3	8.1	10.2	9.2
7	7.3	7.5	7.4	8.3	8.2	8.3	8.1	10.2	9.2
8	7.0	7.7	7.3	8.4	7.8	8.1	8.2	10.2	9.2
9	7.0	7.6	7.3	8.0	7.8	7.9	8.3	10.4	9.3
10	6.7	7.6	7.2	8.0	7.9	7.9	8.4	10.2	9.3
Mittel	---	---	7.2	---	---	8.1	---	---	9.2

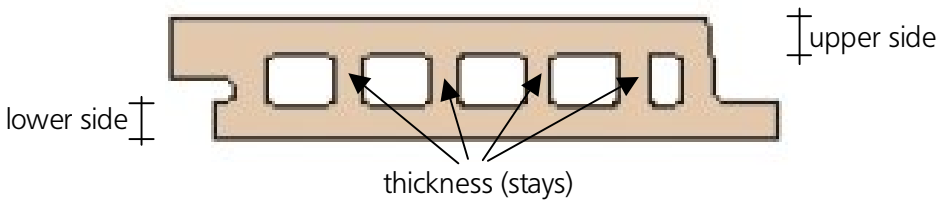


Table 3: surface quality

sample no. ---	curvature [1] 1 mm	2 mm	mean mm	state of surface (description)
1	0.3	0.1	0.2	uniform, very few small open pores
2	0.1	0.0	0.1	uniform, very few small open pores
3	0.1	-0.1	0.0	uniform, very few small open pores
4	0.0	-0.1	-0.1	uniform, very few small open pores
5	0.1	-0.1	0.0	uniform, very few small open pores
6	0.2	0.1	0.1	uniform, very few small open pores
7	-0.2	-0.2	-0.2	uniform, very few small open pores
8	0.1	0.0	0.1	uniform, very few small open pores
9	0.1	0.0	0.1	uniform, very few small open pores
10	0.0	0.3	0.2	uniform, very few small open pores

[1] positive value = curvature downwards, negative value = curvature upwards

Table 4: gauging points at stays

spec. no.	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm
1	14.8	6.7	8.0	25.5	12.9	19.3	22.1	8.2	12.4
2	14.7	6.6	8.1	25.0	13.0	19.1	22.8	8.2	12.6
3	14.6	6.7	8.5	24.3	13.1	19.0	22.6	8.1	11.6
4	14.6	6.8	8.1	25.3	12.9	18.6	22.8	8.0	11.4
5	14.4	6.7	8.5	25.4	12.9	18.5	22.4	8.3	11.9
6	14.6	6.7	8.6	25.5	12.9	18.8	22.0	8.1	11.6
7	14.7	6.7	8.2	25.3	12.9	18.7	22.0	8.1	12.3
8	14.6	6.8	8.0	25.5	13.1	18.8	21.9	8.1	11.5
9	14.5	6.5	8.2	25.9	12.9	18.7	22.2	8.1	11.9
10	14.6	6.7	8.1	26.0	13.1	19.0	22.3	8.2	12.1
Mittel	14.6	6.7	8.2	25.4	13.0	18.8	22.3	8.1	11.9

3.2 Determining the bending strength according to DIN EN 538

The bending strength was tested according to DIN EN 538 on 10 rainscreen plates. The test results are shown in Table 5.

Table 5: bending strength according to DIN EN 538

specimen no.	span mm	breaking load kN
1	994	4.61
2	994	4.71
3	994	4.51
4	994	4.66
5	994	4.48
6	994	4.90
7	994	4.39
8	994	4.51
9	994	4.73
10	994	4.74
Mean fracture load	–	4.62
Smallest fracture load	–	4.39

Hannover, den 17th May 2010
Head of the Testing Institute
By Order

(Dr.-Ing. Höveling)