



Test Report

Testing of limited safety against ball throwing

Report-No.:	903 1925 000-2/Man/Sgm
Client:	Knauf Aquapanel GmbH & Co. KG. Kipperstraße 19 44147 Dortmund
Order-No. (Client):	-
Order-No. (MPA):	903 1925 000
Test Item:	Wall system „W382.de with AQUAPANEL Cement Board Indoor (Lighter.Easier.Faster.)“
Specification Applied	[1] DIN 18032-3:1997-04 Sports halls – Halls for gymnastics, games and multi-purpose use-Part 3: testing of safety against ball throwing
Date of Receipt of Test Item	2016-09-12
Date of Test:	2016-09-16
Date of Report:	2016-10-10
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Die Akkreditierung gilt für die in den Urkunden aufgeführten Prüfverfahren.

1 Purpose of Investigation

With writing of 2016-05-09 you ordered the Materials Testing Institute University of Stuttgart with testing of the limited safety against ball throwing on a wall system according to DIN 18032-3 [1].

2 Tests and Analyses Performed

2.1 Description of the element tested

The element tested was the wall system

„W382.de with AQUAPANEL Cement Board Indoor (Lighter.Easier.Faster.)“

The wall system tested had the dimensions 1875 mm x 2250 mm.

The wall system had a double layer paneling of mineral building boards (AQUAPANEL Cement Board Indoor,Lighter.Easier.Faster.) which are made of Portland cement and aggregates. These boards had the dimensions of 1250 mm x 900 mm x 12,5 mm and were reinforced on both sides with a glass-fiber mesh. The boards had a mass per unit area of 11 kg/m² and an oven dry density of 750 kg/m³.

The base layer of the paneling was screwed to the metal lathwork with 6 screws for each board (AQUAPANEL Maxi screw SN 25). The panels of this layer were assembled with butt joints. The second layer was screwed to the base layer with all 250 mm with AQUAPANEL Maxi Screws SN 39. The second layer was assembled with an offset of the joints to the base layer.

The joints of this layer were filled with AQUAPANEL Joint Adhesive (PU).

The covering of the surface of the wall system was done with AQUAPANEL Board Primer and AQUAPANEL Joint Filler & Skim Coating – white (thickness of 4 cm), reinforced with AQUAPANEL Reinforcing Mesh.

The substructure was built with metal profiles (CW 50/50/06 und UW 50/40/06). This substructure was fixed vertically to the substrate all 625 mm.

2.2 Execution of the tests and analyses

The test was performed according to DIN 18032-3 [1] (accredited test method according to DIN EN ISO / IEC 17025, see DAkkS-certificate D-PL-11027-04-07).

The tests were performed in a laboratory at room temperature.

3 Results of Investigation

Table 1: Results of determination of safety against ball throwing according to DIN 18 032-3 [1] on the wall system „W382.de with AQUAPANEL Cement Board Indoor (Lighter.Easier.Faster.)“

Ball	Impact angle in degree	Number of tests	Deterioration of test item
Handball	90	30	none
Handball	45	12	
Handball	45	12	

The tested element passed the test without damaging.

The test was done only with the handball as the wall system will only be applied in a height > 2m over surface of the sports hall floor.

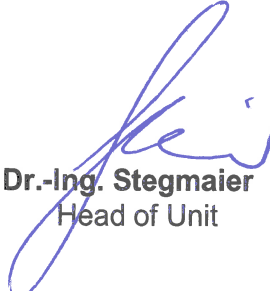
Therefore the element can be evaluated as limited safe against ball throwing according to DIN 18032-3 [1].

This document is valid till 2018-10-10

If the manufacturer proves and the testing institute confirms that the element tested is further-more produced and installed without changes of relevant parts of the construction, the retest at the date mentioned is not necessary.


Manske
Testing Engineer




Dr.-Ing. Stegmaier
Head of Unit

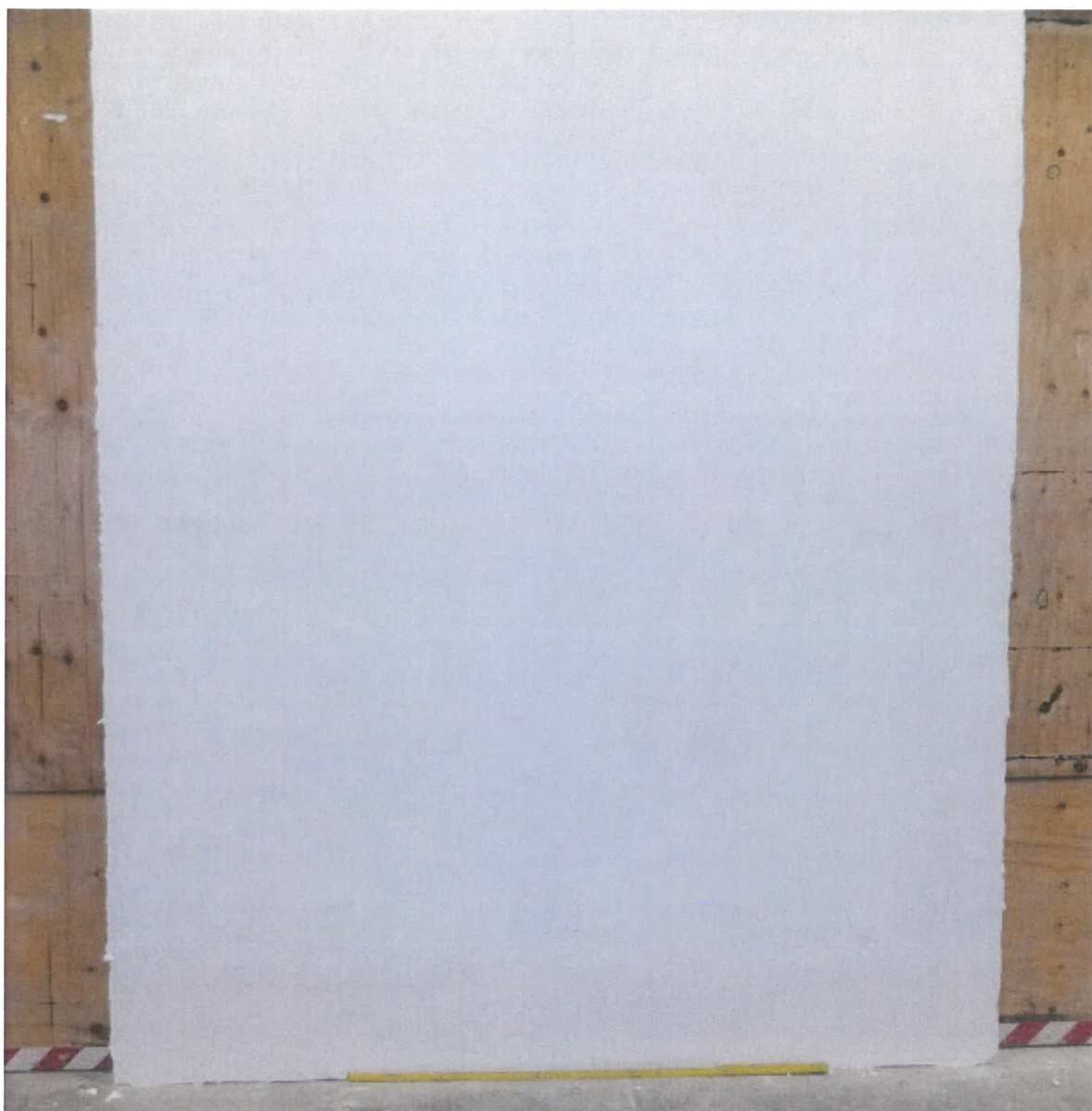


Figure 1:
Total view: Visible face
Wall system “W382.de with **AQUAPANEL Cement Board Indoor (Lighter.Easier.Faster)**“



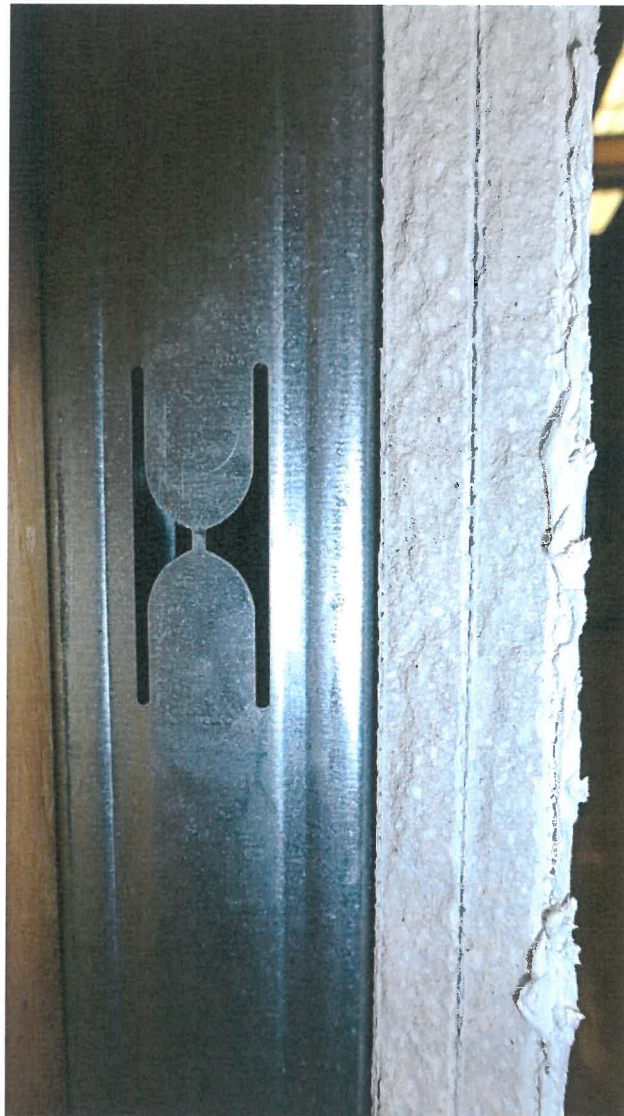


Figure 2:
Detail: substructure
Wall system "W382.de with AQUAPANEL Cement Board Indoor (Lighter.Easier.Faster)"



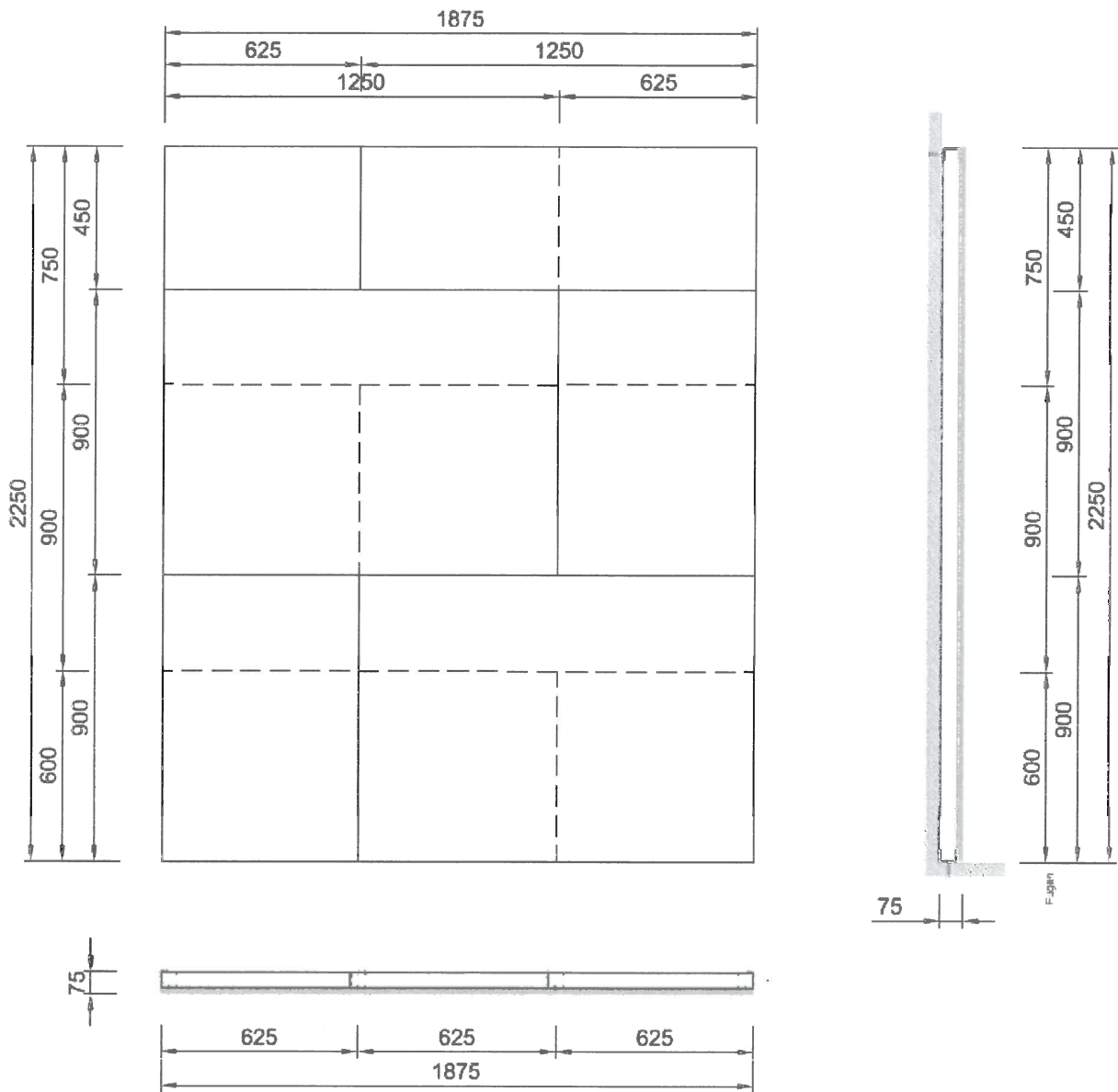


Figure 3:
Design drawing of the wall system
“W382.de with AQUAPANEL Cement Board Indoor (Lighter.Easier.Faster)”

