

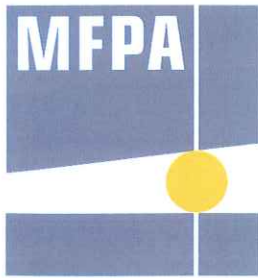
Test Report

Distance tube made of fibre concrete

PB 1.1/ 12-148-2 Ä | 06.06.2012 | english

Testing the water penetration depth on concrete test pieces supplied with built-in distance tubes, sealed on both sides with one fibre-reinforced concrete plug and one fibre-reinforced concrete sealing cone in accordance with DIN EN 12390-8

Tested by: MFPA Leipzig GmbH, Leipzig



VMPA-accredited concrete test authority
VMPA-B-2003

Mfpa Leipzig GmbH

Test, Inspection and Certification Authority for
Building Materials, Products and Systems

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Test report no. PB 1.1/12-148-2 Ä

Replaces PB 1.1/12-148-2 from 05.06.2012
from 06 June 2012
1. copy

Subject matter: Testing the water penetration depth on concrete test pieces supplied with built-in 'FRANK fibre-reinforced concrete distance tubes – MR 22', sealed on both sides with one fibre-reinforced concrete plug ST220020 and one fibre-reinforced concrete sealing cone FBVKZ22 in accordance with DIN EN 12390-8

Client: Max Frank GmbH & Co. KG
Mitterweg 1
94339 Leiblfing

Date of order: 10.05.2012

Client's reference: J. Schmidbauer

Samples received on: 15.05.2012

Sampling: Client

Identification: B 1 to B 3

Date of testing: 22.05. to 25.05.2012

Person in charge: Dipl.-Ing. M. Becker

This document consists of 3 pages and 2 appendices.

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The General Terms and Conditions of Business (GTC) of Mfpa Leipzig GmbH apply.



Testing laboratory accredited by DAkkS GmbH in accordance with DIN EN ISO/IEC 17025. The accreditation only applies for the testing methods listed in the certificate (marked with * in this document). The certificate can be seen at www.mfpa-leipzig.de.

Gesellschaft für Materialforschung und Prüfungsanstalt für das Bauwesen Leipzig mbH (Mfpa Leipzig GmbH)

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1 Preliminary remarks

MFPA Leipzig GmbH was commissioned to test the water penetration depth in accordance with DIN EN 12390-8 [1] of concrete-cast 'FRANK fibre-reinforced concrete distance tubes – MR 2' with glued-in fibre-reinforced concrete sealing plugs/cones (edge length 15 cm). Unlike in the test specification, the test was performed on composite test pieces. The samples were stored at 20 °C under water until tested.

2 Test results

2.1 Sample identification

Series B: B 1 to B 3 sealed on each side with one fibre-reinforced concrete plug St220020 and one fibre-reinforced concrete sealing cone FBVKZ22, glued in with 'Repoxal two-pot adhesive'

Strength class: C 20/25

Date of manufacture: 10.04.2012

Date of testing: 22.05.2012

Age of sample: 42 days

2.2 Water penetration depth

At the end of the test the samples were split along the concrete-cast 'FRANK fibre-reinforced concrete distance tubes – MR22'. The test results are summarised in Table 1. Appendix 1 shows the water distribution after the test pieces were split. Appendix 2 contains a documentation of the test pieces after testing.

Table 1: Series B

Test piece	Water penetration depth [mm]
1	13
2	27
3	27

3 List of references

- [1] DIN EN 12390-3 'Testing hardened concrete – water penetration depth under pressure';
Edition 07/2009

The results of the tests refer exclusively to the test items described herein and not to the population. This document does not replace any certificate of conformity or usability as defined by the building regulations (national/European).

Leipzig, 06 June 2012


Dipl.-Ing. M. Orgass
Head of Division



SAC 02
NB 0800


Dipl.-Ing. M. Becker
Team Leader

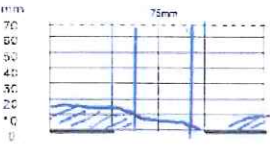
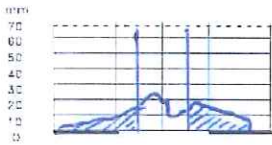
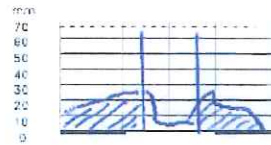

Appendices: Appendix 1 Test records of water penetration depth
Appendix 2 Documentation of the test pieces



Test record of the water penetration depth

MFPA LEIPZIG GmbH Hans-Weigel-Str. 2b 04139 Leipzig Tel. 0341 / 6582145	PRÜFUNG DER WASSERUNDURCHLÄSSIGKEIT VON BETON NACH DIN EN 12390-8	
-----------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------

Angaben des Auftraggebers			
[.....] Eignungsprüfung	[.....] Güteprüfung	SollprüfalterTage	
Baustelle / Bauwerk			
Bauteil / Entnahmestelle			
Transportbetonwerk			
Betonsorten-Nr.:	<i>Sorte B</i>		
Festigkeitsklasse	<i>C20/25</i>		
TB Lieferschein-Nr.:			
Probekörper - Herstellungsdatum	<i>03.04.2012</i>		
Zul. Wassereindringtiefe (mm)			
Lagerung bis Einlieferung :	Tage in der Form bei	°C und	Tage im Wasser bei °C

Feststellungen der Prüfstelle			
Tag der Einlieferung	<i>15.05.2012</i>	angenommen von : <i>Becker</i>	
äußere Beschaffenheit	<i>i.O.</i>		
nachträgliches Aufrauen	<i>nein</i>		
Lagerung bis zur Prüfung	<i>4</i> Resttage in Wasser bei <i>20</i> °C		
Probekörper-Kennzeichen	<i>B1</i>	<i>B2</i>	<i>B3</i>
Beginn der Prüfung Datum	<i>22.05.2012</i>	<i>22.05.2012</i>	<i>22.05.2012</i>
Prüfalter bei Prüfbeginn Tage			
Abmessungen mm	<i>150 x 150 x 150</i>	<i>150 x 150 x 150</i>	<i>150 x 150 x 150</i>
Darstellung der Wasserverteilung nach dem Aufspalten der Prüfkörper			
größte Eindringtiefe e _w mm	<i>13</i>	<i>27</i>	<i>27</i>
größter Wert e _w mm		<i>27</i>	
Bemerkungen :			
<i>Leipzig</i>	<i>25.05.2012</i>	 <i>[Signature]</i>	
Ort	Datum	Stempel / Unterschrift	

Documentation of the test pieces

(Photos 1 to 3)



Photo 1: Series B 'FRANK fibre-reinforced concrete distance tubes – MR 22 with one fibre-reinforced concrete plug and one fibre-reinforced concrete sealing cone FBVKZ22, sample 1

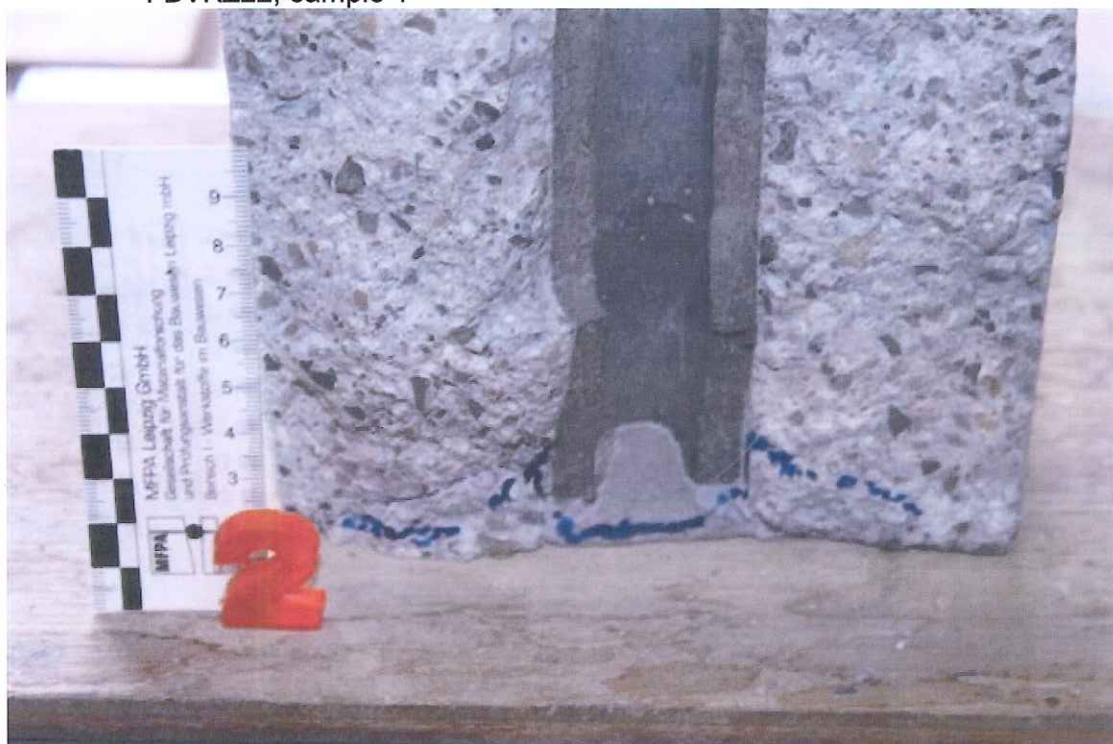


Photo 2: Series B 'FRANK fibre-reinforced concrete distance tubes – MR 22 with one fibre-reinforced concrete plug and one fibre-reinforced concrete sealing cone FBVKZ22, sample 2

Documentation of the test pieces

(Photos 1 to 3)

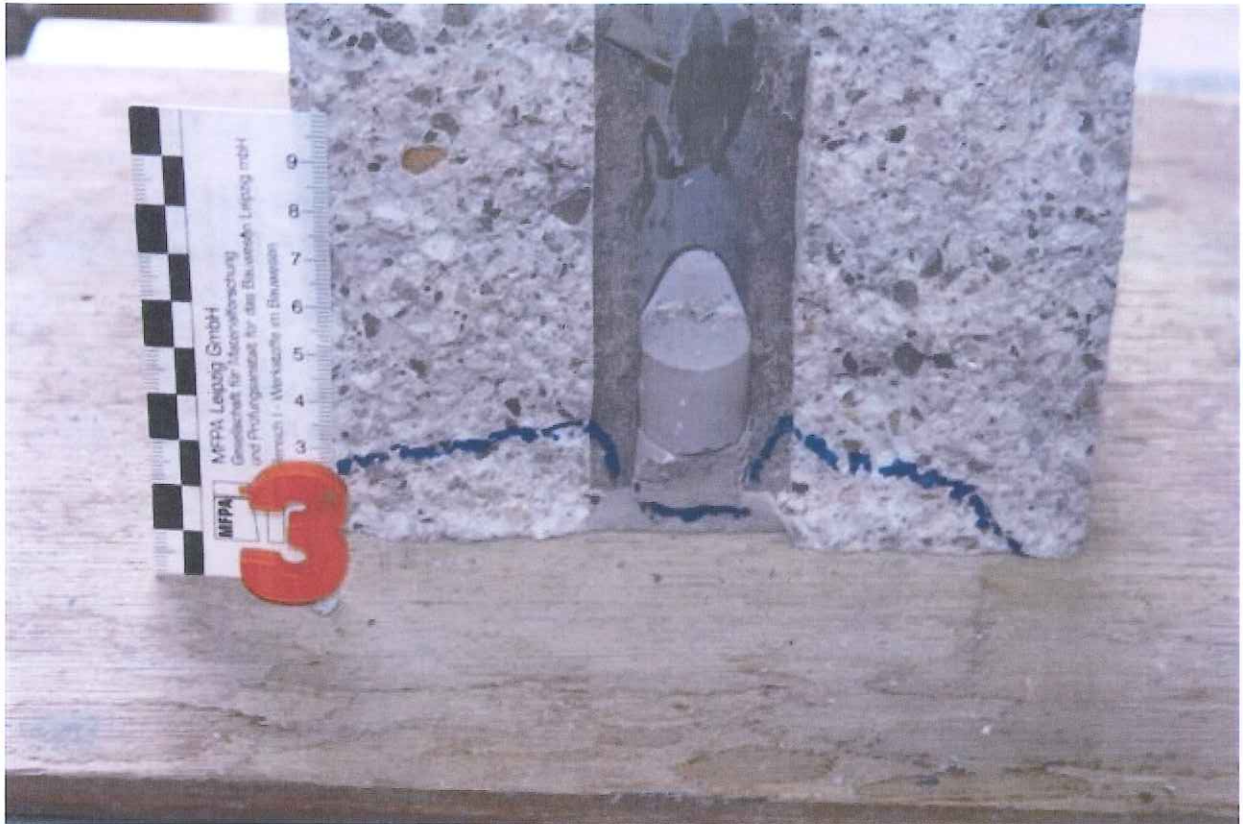


Photo 3: Series B 'FRANK fibre-reinforced concrete distance tubes – MR 22 with one fibre-reinforced concrete plug St220020 and one fibre-reinforced concrete sealing cone FBVKZ22, sample 3