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Civil Engineering Materials Testing Institute - Beethovenstr. 52 - D-38106 Braunschweig

Max Frank GmbH & Co.
KG
Mr Reinhard Lindner
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94339 Leiblfing

Letter

11017/2016

Our ref: (2101/442/16)-TP
Client no.: 4430
Person responsible: Mr Paul
Department: BS
Contact: 0160-90668296
t.paul@ibmb.tu-bs.de

Your ref: Mr R. Lindner
Your communication of: 08.06.2016

Date: 14.06.2016

Validity of the expert opinion no. 143/01-Mer of 28/06/2001 of the MPA Braunschweig in conjunction with the supplementary letters no. 15906/2008-TP of 08/09/2008 and no. 7708/2009-TP of 24/04/2009

Ladies and gentlemen,

With a letter of 08/06/2016, the MPA Braunschweig was commissioned by Max Frank GmbH Co. KG, Leiblfing, to extend the validity of the expert opinion no. 143/01-Mer of 28/06/2001 of the MPA Braunschweig in conjunction with the supplementary fire protection statements made in the letters no. 15906/2008-TP of 08/09/2008 and no. 7708/2009-TP of 24/04/2009.

We hereby inform you that the statements made in the expert opinion no. 143/01-Mer of 28/06/2001 of the MPA Braunschweig in conjunction with the supplementary fire protection statements made in the letters no. 15906/2008-TP of 08/09/2008 and no. 7708/2009-TP of 24/04/2009 regarding

reinforced concrete walls with formwork spreaders made of fibre cement on the basis of
DIN 4102-2:1977-09 or DIN 4102-4:1994-03

are still valid.

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The validity of the expert opinion no. 143/01-Mer of 28/06/2001 of the MPA Braunschweig in conjunction with the supplementary fire protection statements made in letters no. 15906/2008-TP of 08/09/2008 and no. 7708/2009-TP of 24/04/2009 in conjunction with this letter ends at the latest on 13/06/2021. The aforementioned expert opinion in conjunction with the specified supplementary letters is valid only in conjunction with DIN 4102-4:1994-03.

Your sincerely

p.p.

ORR Dr.-Ing. Blume

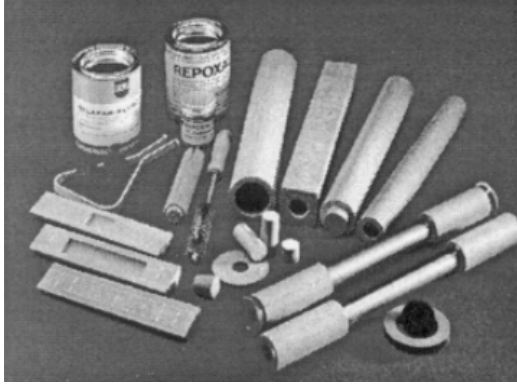
Head of department

p.p.

Dipl.-Ing. Paul

Person responsible

Fire resistance ratings of the types of seal of FRANK fibre-reinforced concrete distance tubes



FRANK fibre concrete distance tubes

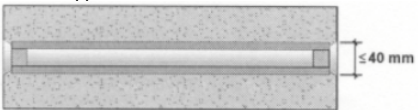
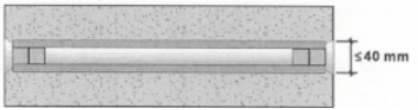
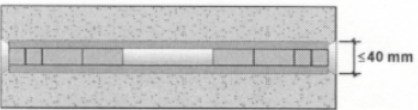
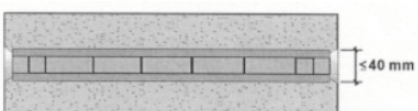
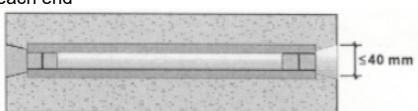

are sealed by gluing in precisely fitting fibre concrete stoppers using Repoxal two-component adhesive

Processing instructions

-clean the cast-in FRANK fibre concrete distance tube with a wire brush
-glue in fibre concrete stoppers at both ends using Repoxal two-component adhesive according to the requirements. In the case of fire walls, additionally fill the remaining void with swelling mortar 3/25.

Required articles

FRANK fibre concrete distance tube with sealing elements (length adapted to wall thickness)
FRANK fibre concrete stoppers
RepoXal two-component glue
Special mortar 3/25 (in case of fire walls)

Fire resistance rating	Minimum wall thickness*	Type of seal
F30	Reinforced concrete walls made of normal concrete** non load-bearing load-bearing F30 = 80 mm 120 mm	Normal seal with a stopper at each end 
F30 - F180	Reinforced concrete walls made of normal concrete** non load-bearing load-bearing F30 = 80 mm 120 mm F60 = 90 mm 130 mm F90 = 100 mm 140 mm F120 = 120 mm 160 mm F180 = 150 mm 210 mm	Watertight seal with two stoppers at each end 
F30 - F180	Reinforced concrete walls made of normal concrete** non load-bearing load-bearing F30 = 80 mm 120 mm F60 = 90 mm 130 mm F90 = 100 mm 140 mm F120 = 120 mm 160 mm F180 = 150 mm 210 mm	Soundproof seal with two or more stoppers that together correspond to 4/5 of the wall thickness 
F30 - F180	Reinforced concrete walls made of normal concrete** non load-bearing load-bearing F30 = 80 mm 120 mm F60 = 90 mm 130 mm F90 = 100 mm 140 mm F120 = 120 mm 160 mm F180 = 150 mm 210 mm	Gastight seal with several stoppers that fill the void over the entire wall thickness 
F30 - F180	Reinforced concrete walls made of normal concrete** non load-bearing load-bearing F30 = 80 mm 120 mm F60 = 90 mm 130 mm F90 = 100 mm 140 mm F120 = 120 mm 160 mm F180 = 150 mm 210 mm	Sealing of conical holes with a fibre concrete sealing cone and a stopper at each end 
Fire walls F90	Fire walls made of normal concrete unreinforced concrete F90 = 200 mm reinforced concrete non load-bearing load-bearing F90 = 120 mm 140 mm	Sealing of fire walls with two stoppers at each end – in addition, completely fill the remaining void with FRANK special mortar 3/25 

* according to DIN 4102-4:1994-03

** with a utilisation factor α_1 of 1.0 (with a lower utilisation factor, the wall thickness may be reduced in accordance with DIN 4102)

Structure of the reinforced concrete walls

Detail: Formwork spreaders

Civil Engineering Materials Testing Institute

Institute of Building Materials, Concrete Construction
and Fire Safety of the Technical University of
Braunschweig

Appendix 1 to

letter

no.: 143/01 - Mer-