

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-19/0228
of 30 January 2020

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

PYRO-SAFE FLAMMOPLAST KS 1

Product family
to which the construction product belongs

Intumescent product used for penetration seals

Manufacturer

svt Brandschutz
Vertriebsgesellschaft mbH International
Glüsinger Straße 86
21217 Seevetal
DEUTSCHLAND

Manufacturing plant

svt Brandschutz
Vertriebsgesellschaft mbH International
Glüsinger Straße 86
21217 Seevetal
DEUTSCHLAND

This European Technical Assessment
contains

11 pages including 7 annexes which form an integral part
of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

EAD 350454-00-1104

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Specific Part

1 Technical description of the product

The construction product "PYRO-SAFE FLAMMOPLAST KS 1" is an intumescent material which expands under heat exposure. It is provided in the form of a white liquid.

A detailed technical description of the fire safety related performance criteria of the construction product is given in Annex 1. Detailed information on the construction product's components is deposited with DIBt.

NOTE:

The characteristics listed are suitable both for identifying the construction product as well as for performing the manufacturer's factory production control.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The construction product "PYRO-SAFE FLAMMOPLAST KS 1" is intended for use as a component with a fire protection effect in penetration seals that are subject to fire safety requirements. In the event of fire, the intumescent effect helps prevent the passage of heat and the spread of fire. Construction products for penetration seals are used to seal openings in fire-resistant floors and walls which are penetrated by services.

This ETA served to verify the resistance to fire of penetration seals consisting of the products listed in Annex 1.

Their function is to preserve the walls' or floors' resistance to fire in the area of openings where services were fed through.

More detailed information and data on the verified penetration seals are given in Annexes 3 to 7.

The construction product "PYRO-SAFE FLAMMOPLAST KS 1" is only intended for use in penetration seals applied under dry internal conditions without frost of use category Z₂ (relative humidity between 50 % and 85 % and temperatures between +5 °C and 90 °C ± 5 °C).

The performance data in Section 3 relates only to the penetration seals tested as part of this assessment (e.g. regarding the design and arrangement of the penetration seal components and the type and position of the services).

3 Performance of the product and references to the methods used for its assessment

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction-to-fire	Class E in accordance with EN 13501-1
Resistance to fire of a penetration seal containing the product	The resistance to fire depends on how the penetration seal is designed and installed and on the other components forming the penetration seal. More details on the tested penetration seals and the related fire resistance classes are given in Annexes 1 to 7.

3.2 Hygiene, health and the environment (BWR 3)

Content and release of dangerous substances	No dangerous substances ¹
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4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal basis

In accordance with European Assessment Document (EAD) no. 350454-00-1104, the following legal basis shall apply: 1999/454/EC.
The system to be applied is: system 1.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the test plan (control plan) deposited with DIBt.

Issued in Berlin on 30 January 2020 by Deutsches Institut für Bautechnik

Maja Tiemann
Head of Department

beglaubigt:
Bisemeier

¹ In accordance with Regulation (EC) No 1272/2008 of the European Parliament and the European Council of 16 December 2008 (published in the *Official Journal of the European Communities* L 353 of 31 December 2008, p. 1)

Properties and criteria of the performance of the construction product

"PYRO-SAFE FLAMMOPLAST KS 1"*

Property/ Performance criteria	Parameter
Density	1200 kg/m ³ to 1370 kg/m ³
Nonvolatile components	67,0% ± 5,0% (tested on 105°C over 3 hours) ¹
Loss mass on heating	65,0% ± 5,0% (tested on 400°C over 30 minutes) ¹
Expansion ratio	105 to 130 (tested on 400°C over 30 minutes without applied wight with dried samples) ¹
Fire behavior	Class E

The properties listed can be used both for the identification of the construction product and for the implementation of the factory production control of the manufacturer. Implementation details for the factory production control are included in the inspection plan.

¹ Implementation details of the test method are deposited at DIBt.

Description of the additional ingredients of the tested sealings

Mineral wool boards	"Hardrock 040"; Deutsche Rockwool Mineralwoll GmbH & Co. OHG, 45966 Gladbeck, Germany; EN 13162:2012+A1:2015 thickness: 60 mm Classification of fire behavior acc. to EN 13501-1: Class A1
Intumescent filler	"PYRO-SAFE FLAMMOPLAST KS 3" acc. to allgemeine bauaufsichtliche Zulassung Nr. Z-19.11-390.
Mineral wool boards	"FPB D150"; Knauf Insulation GmbH, 85748 Garching bei München, Germany; EN 13162:2012+A1:2015 thickness: 50 mm Classification of fire behavior acc. to EN 13501-1: Class A1
Wrap	Material: flexible intumescent fabrics "PYRO-SAFE DG-CR" acc. to ETA-16/0268 Classification of fire behavior acc. to EN 13501-1: Class E

The use of the construction products "PYRO-SAFE FLAMMOPLAST K 1" in penetration seals shall be in accordance with national requirements of planning, design and execution and in accordance with the installation instruction of the manufacturer.

* The composition of the materials is deposited at DIBt.

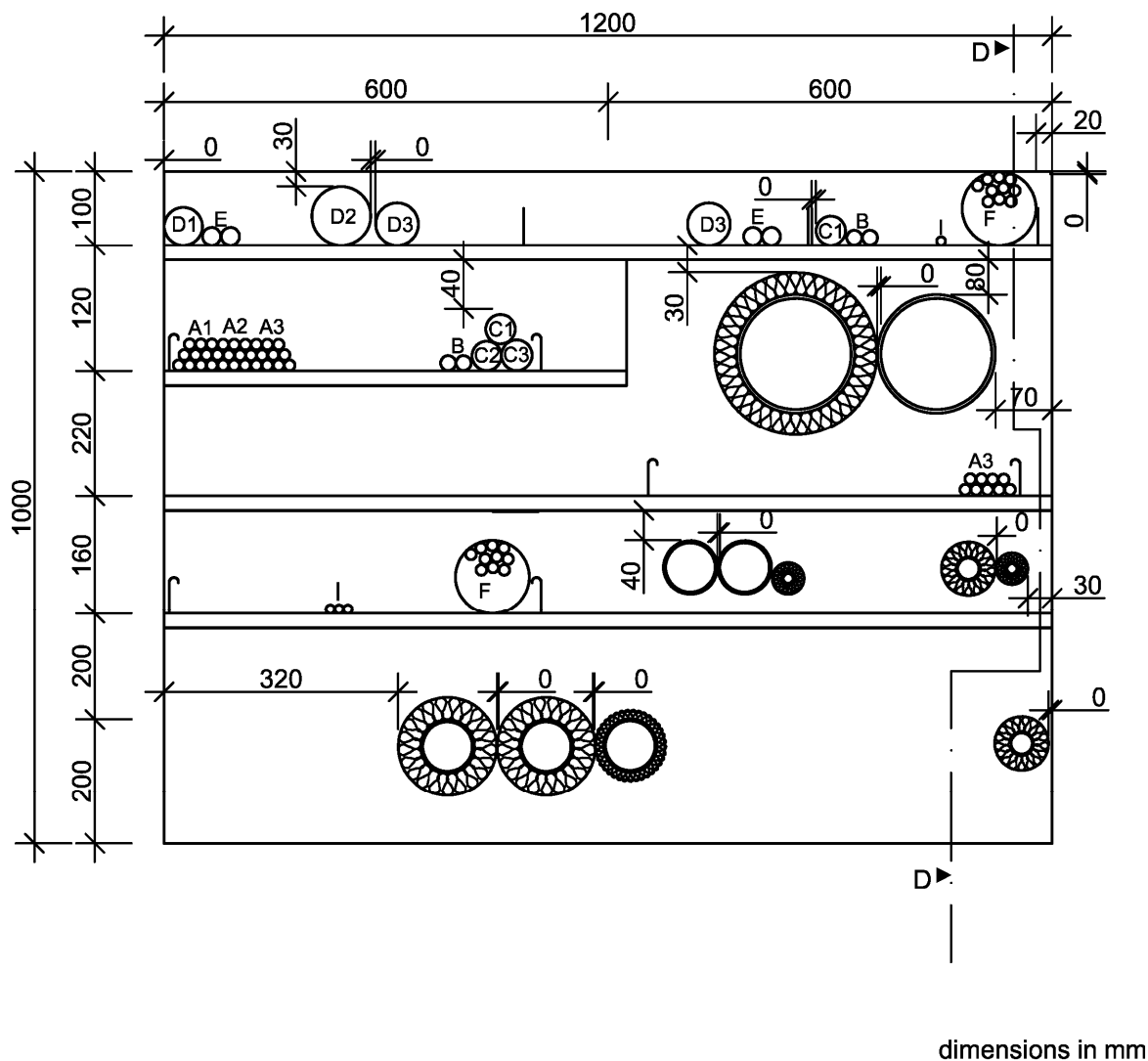
PYRO-SAFE FLAMMOPLAST KS 1

Description of the construction products, properties and performances

Annex 1

Performance of penetration seals, comprising the construction product "PYRO-SAFE FLAMMOPLAST KS 1"			
Essential requirement	Test method	Construction of the sample	Performance acc. to EN 13501-2
Resistance to fire	EN 1366-3	Penetration seal used in a 175 mm thick rigid wall; design and layout of the penetration seal acc. to annex 3 und 5*	EI 120
Resistance to fire	EN 1366-3	Penetration seal used in a 180 mm thick rigid floor; design and layout of the penetration seal acc. to annex 4 und 5*	EI 120
Resistance to fire	EN 1366-3	Penetration seal used in a 240 mm thick rigid wall; design and layout of the penetration seal acc. to annex 6 und 7*	EI 240
Resistance to fire	EN 1366-3	Penetration seal used in a 200 mm thick rigid floor; design and layout of the penetration seal acc. to annex 6 und 7*	EI 240
<p>* The illustrations on annexes 3 till 7 are without guarantee for completeness.</p> <p>The tested/ illustrated seals are only examples for the use.</p>			
PYRO-SAFE FLAMMOPLAST KS 1			Annex 2
Description of the construction products, properties and performances			

EI 120/ floor



PYRO-SAFE FLAMMOPLAST KS 1

View of the configuration of a penetration seal with the fire resistance class EI 120,
installed in a rigid floor construction in acc. to EN 1366-3

Annex 4

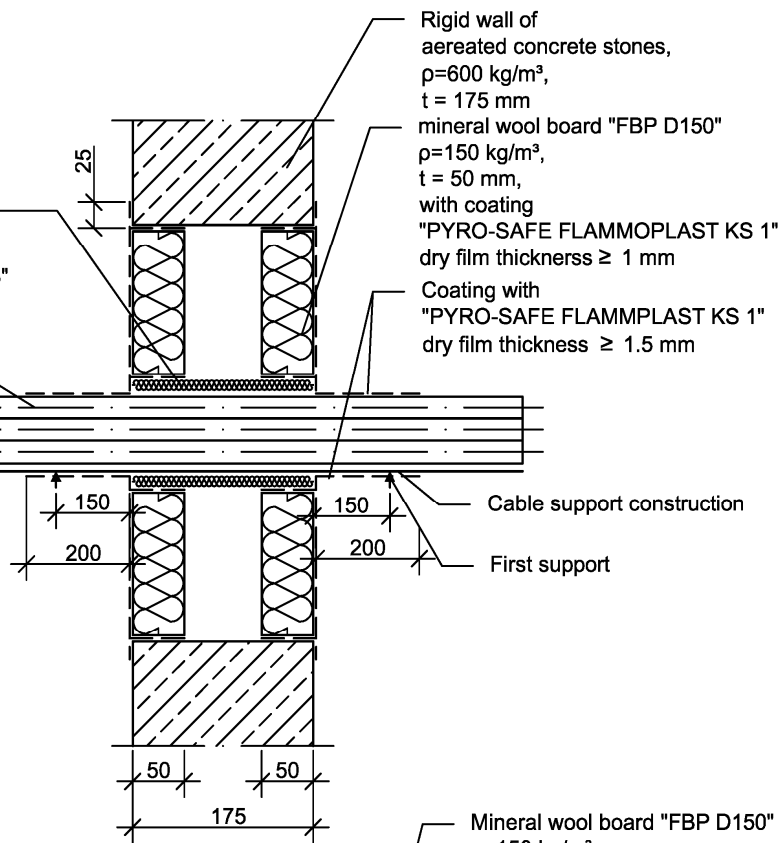
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section view C - C

Wall installation

Annular gap filled with loose mineral wool melting point > 1000°C and sealed with intumescent filler, "PYRO-SAFE FLAMMOPLAST KS 3"

F-cable bundle (telecommunication cables) Ø 100 mm of single cables Typ A2-Y (L) 2Y St III Bd

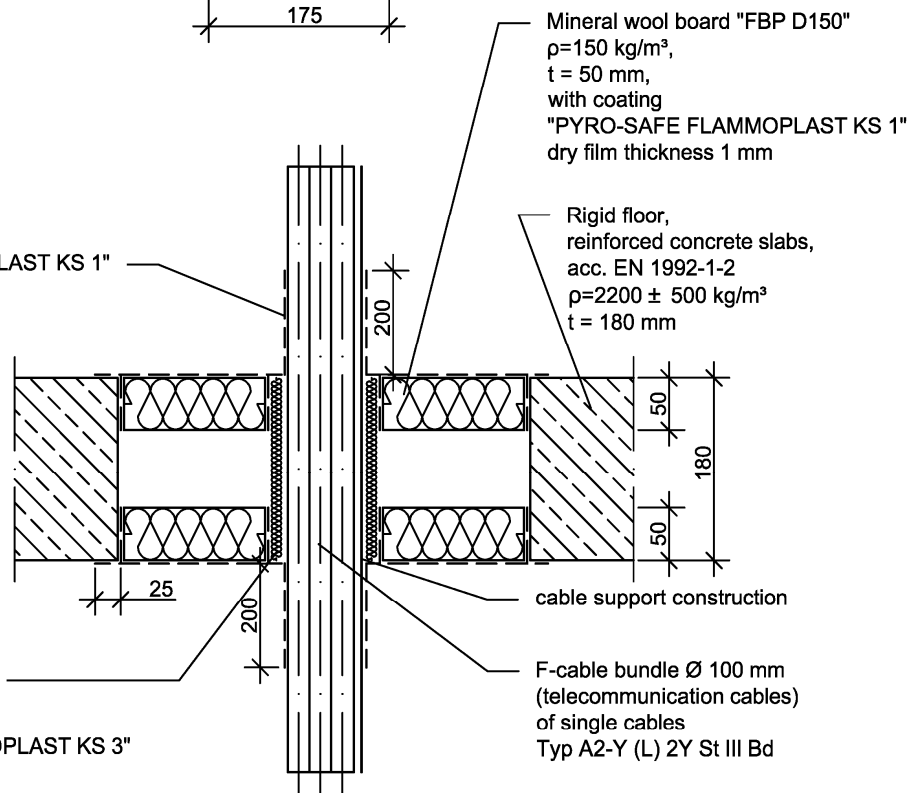


Section view D - D

Floor installation

Coating with "PYRO-SAFE FLAMMOPLAST KS 1" dry film thickness 1.5 mm

Annular gap filled with loose mineral wool, melting point > 1000°C and sealed with intumescent filler "PYRO-SAFE FLAMMOPLAST KS 3"

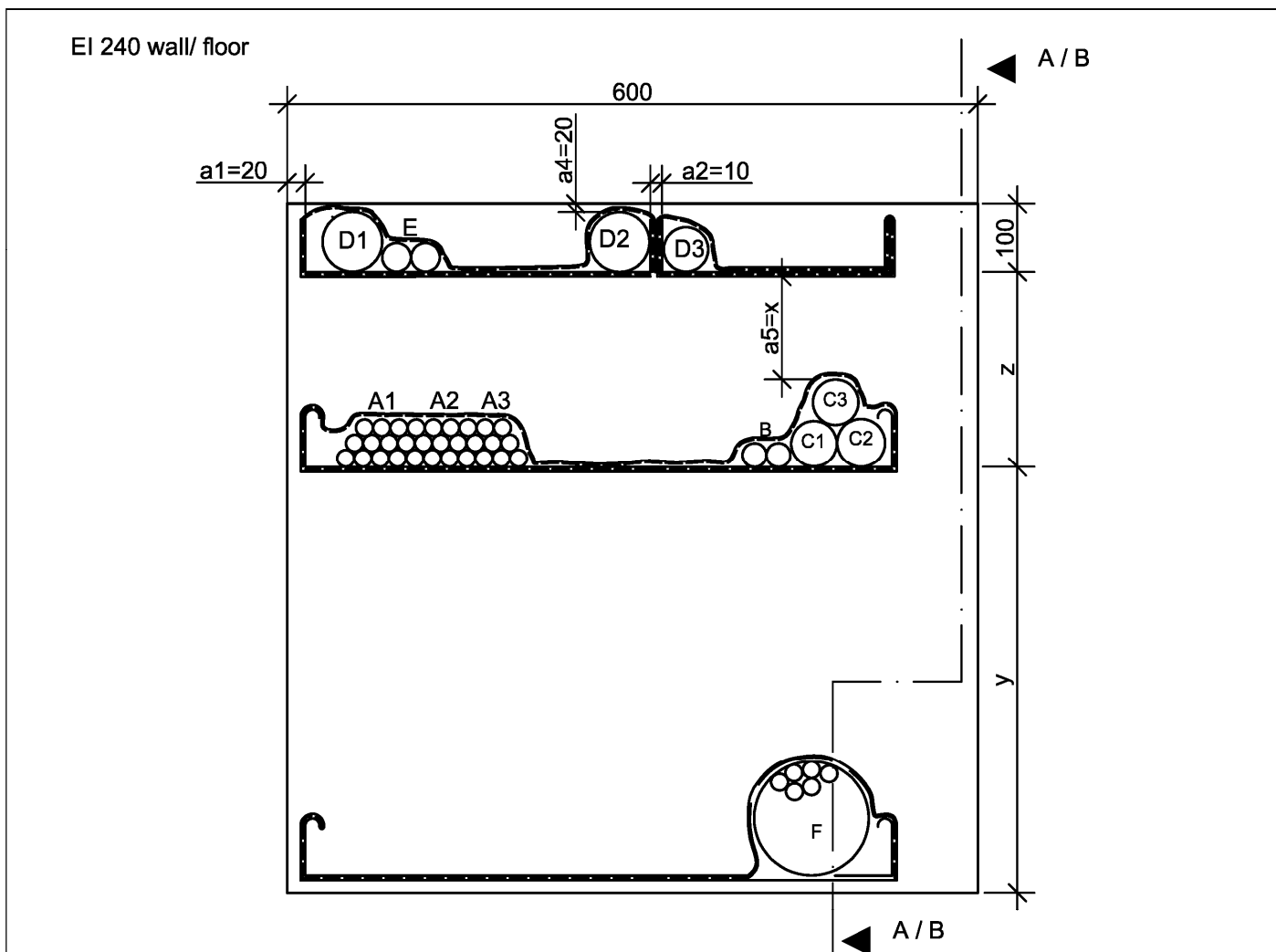


dimensions in mm

PYRO-SAFE FLAMMOPLAST KS 1

Example for a pipe sealing of the fire resistance class EI 120, using the construction product "PYRO-SAFE FLAMMOPLAST KS 1"

Annex 5



dimensions in mm

	x	y	z
wall installation	80	330	170
floor installation	40	380	120

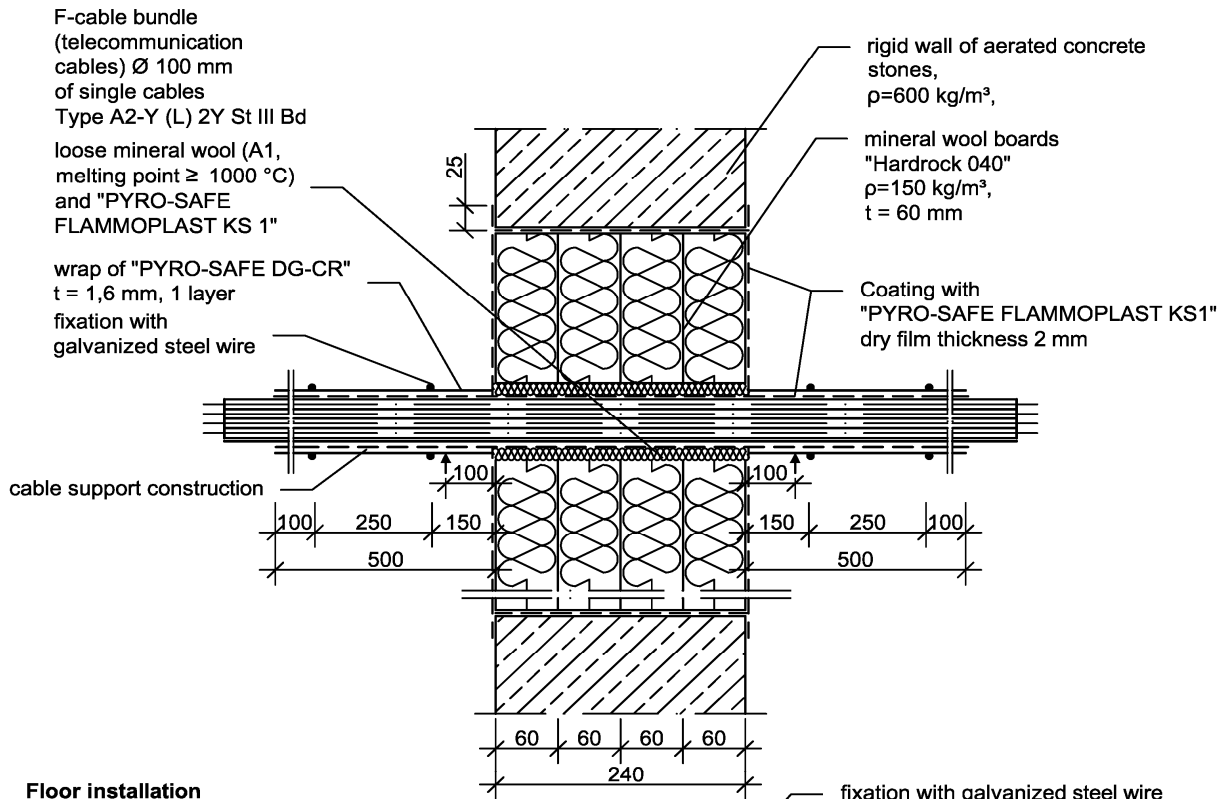
PYRO-SAFE FLAMMOPLAST KS 1

View of the configuration of a penetration seal with the fire resistance class EI 240, installed in a rigid floor construction resp. rigid wall construction in acc. to EN 1366-3

Annex 6

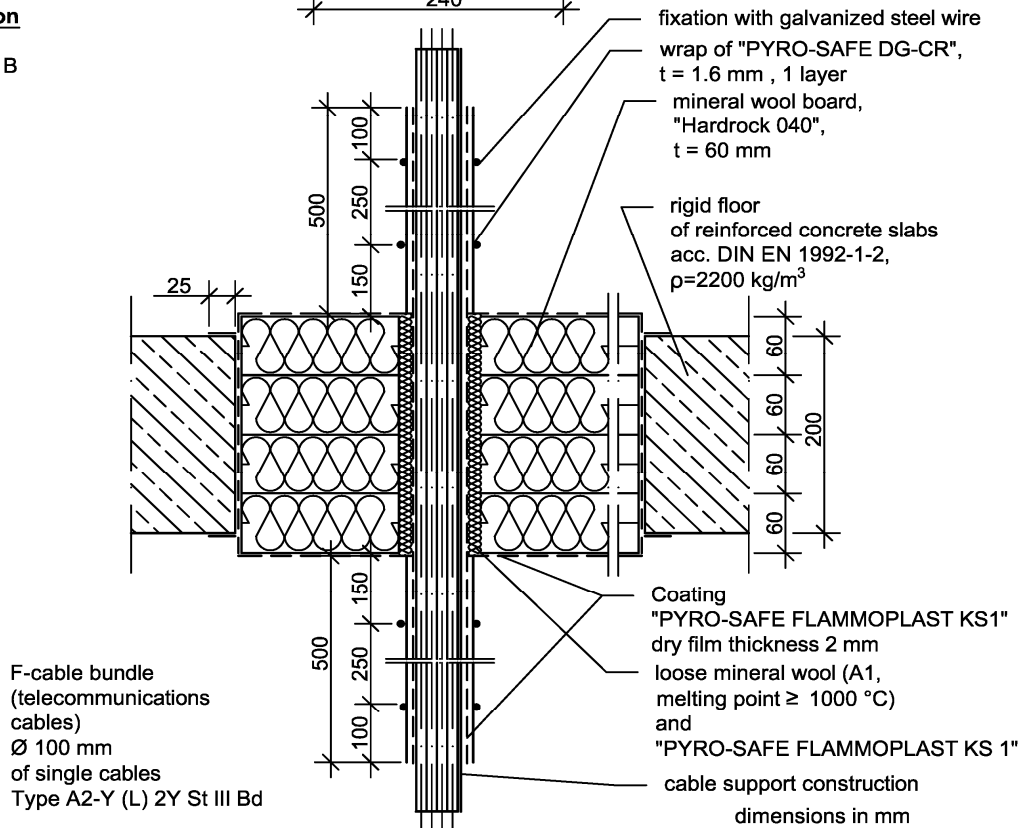
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wall installation
section view A - A



Floor installation

section view B - B



PYRO-SAFE FLAMMOPLAST KS 1

Example for a pipe sealing (wall and floor) of the fire resistance class EI 240, using the construction product "PYRO-SAFE FLAMMOPLAST KS 1"

Annex 7