



Laboratory for Firesafety

Classification of fire resistance of a Sinhboard wall with steel studs in accordance with EN 13501-2:2007+A1:2009

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Classification of fire resistance of a Sinhboard wall with steel studs in accordance with EN 13501-2:2007+A1:2009

Sponsor	Withindia BV Oosteinde 26 2271 EH Voorburg
Prepared by	Peutz bv Lindenlaan 41, NL-6584 AC Molenhoek Postbus 66, NL-6585 ZH Mook The Netherlands
Notified body	NB 2264
Product name	Sinhboard wall with steel studs
Report number	YA 1703-1E-RA
Date of issue	April 11, 2016
Reference	JM/MJa/KS/YA 1703-1E-RA
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All orders are accepted and executed according to 'De Nieuwe Regeling 2011' (The New Rules)

BTW NL004933837B01 KvK: 12028033

mook – zoetermeer – groningen – düsseldorf – dortmund – berlijn – leuven – parijs – lyon – sevilla

1 Introduction

This classification report defines the fire resistance classification assigned to a Sinhboard wall with steel studs. The system was tested in the Peutz Laboratory for Fire Safety in Mook according to the standard heating curve and in accordance with the procedures given in EN 13501-2:2007+A1:2009.



For performing the testing and classification, the Laboratory for Fire Safety is recognized by the "Stichting Raad voor Accreditatie" (RvA).

The RvA is member of the EA MLA (**EA MLA: European Accreditation Organisation MultiLateral Agreement**: <http://www.european-accreditation.org>).

EA: "Certificates and reports issued by bodies accredited by MLA and MRA members are considered to have the same degree of credibility, and are accepted in MLA and MRA countries."

2 Details of the classified system

2.1 General

The element, a Sinhboard wall with steel studs, is defined as a non-loadbearing wall partition.

2.2 Product description

The element, a Sinhboard with steel studs, is fully described in the test report listed in table 3.1.

The element consists of vertical steel studs and horizontal steel profiles. The studs have been filled with rockwool (Rockwool RW210). The steel studs and profiles have been mounted to the testing frame with blow plugs (6x60 mm). On both sides of the vertical steel studs and the vertical steel profiles a 150 mm wide strip of Sinhboard (6 mm) has been mounted with drywall screws (3,5x35 mm). The cavity has been filled with rockwool (Rockwool RW210, 70 mm). Further on a second layer of Sinhboard (9 mm) has been mounted on both sides with drywall screws (3,5x45 mm). Finally the construction has been finished with Nulifire FS 703 at the edges.

3 Reports and test results in support of the classification

3.1 Used reports

An overview of the used reports is given in Table 3.1.

t3.1 Used reports

Name of laboratory	Name of sponsor	Reports reference number and date	Used methods
Peutz bv	Withindia BV	Test report Y 1703-1E-RA-001 dated 11-04-2016	EN 1363-1:2012 EN 1364-1:2015

The client has stated that the provided reports may be used for this classification report.

3.2 Test results

The summary of the test results achieved is shown in Table 3.2.

t3.2 Test results

Test standard	Parameter	Subcriterion	Result
EN 1363-1:212	Integrity (E)		
EN 1364-1:2015			
	Thermal insulation (I)	- Cotton pad	82 min*
		- Gap gauges	82 min
		- Sustained flaming	82 min*
		- Average temperature rise	82 min
		- Maximum temperature rise	82 min

The test was finished after 82 minutes in dialog with the sponsor. After finishing the test, the criteria marked with a '*' where not reached yet.

4 Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with Clause 7.5.2 of EN 13501-2:2007+A1:2009.

4.2 Classification

The element, a Sinhboard wall with steel studs, is classified according to the following combinations of performance parameters and classes as appropriate.

Fire resistance classification

height of wall up to 3 m : EI 60
height of wall up to 3 m : EW 60
height of wall up to 3 m : E 60

height of wall up to 4 m : EI 30
height of wall up to 4 m : EW 30
height of wall up to 4 m : E 30

4.3 Field of application

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability.

Construction

- decrease in height;
- increase in the thickness of the wall;
- increase in the thickness of component materials;
- decrease in linear dimensions of boards or panels but not thickness;
- decrease in stud spacing;
- decrease in distance of fixing centres;
- increase in the number of horizontal joints, of the type tested;
- increase in the number of vertical joints, of the type tested;
- extra horizontal and/or vertical joints, of the type tested.

Width

The specimen has been tested with a nominal wide of 3 m and a free edge, so an identical construction with a increased width may be applied.

Height

- Since the specimen is tested with a height of 3 m and the deflection perpendicular to the wall after a test duration of 30 minutes was less than 100 mm the construction may be applied to a height of 4 m for a fire resistance of 30 minutes, provided that the expansion possibilities are increased proportionally;
- After one hour test duration, the deflection of the wall did exceed 100 mm. Therefore the wall may be applied up to 3 m, for a fire resistance of 60 minutes.

5 Limitations

This classification document does not represent type approval or certification of this product.

Ir. J.J. Mertens



Head of Laboratory for Fire Safety

Mook,

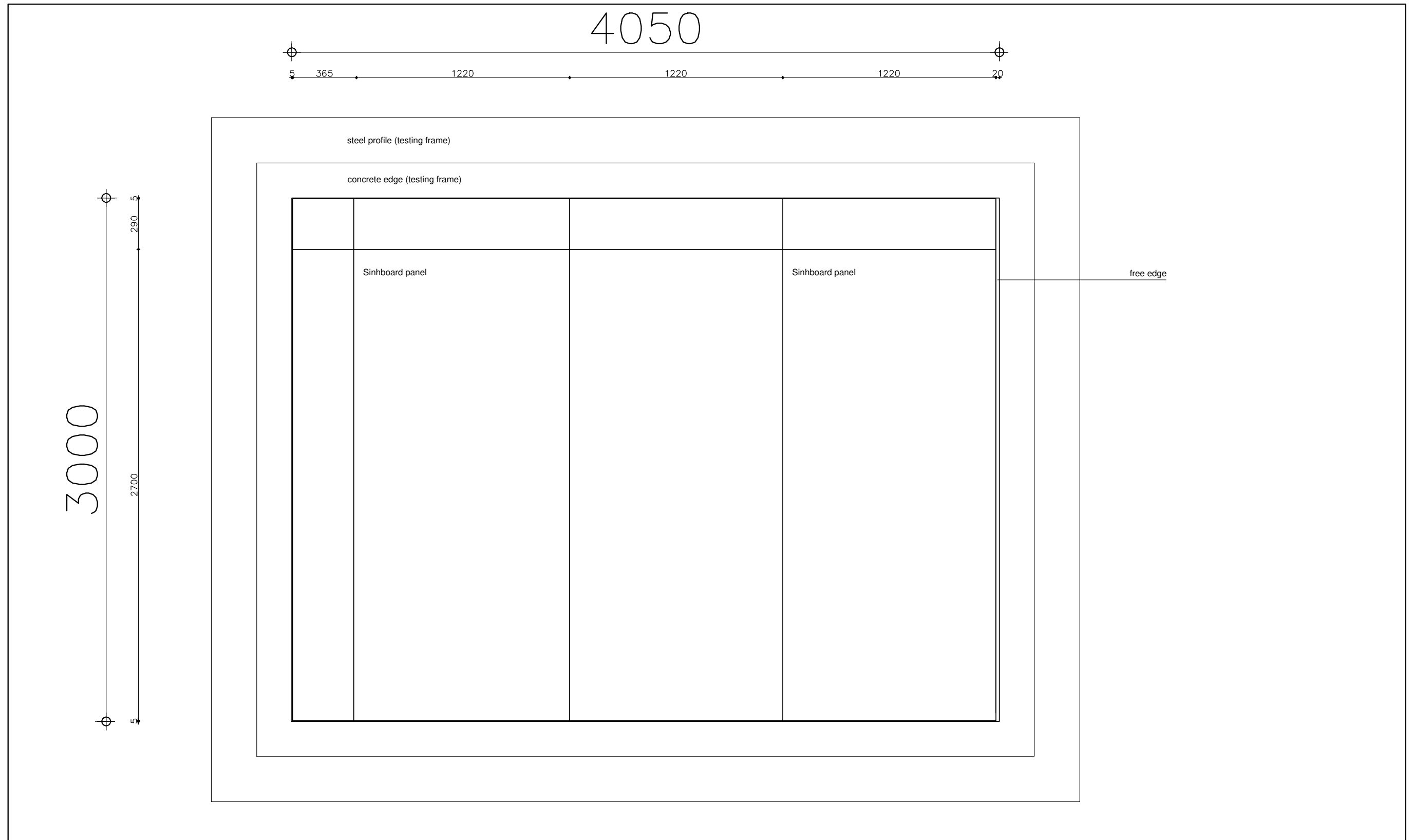
Ing. D.J. den Boer



Management

This report contains 7 pages and 1 appendix:
Appendix 1 Drawings (6 pages).

Appendix 1 Drawings



ELEVATION TEST WALL

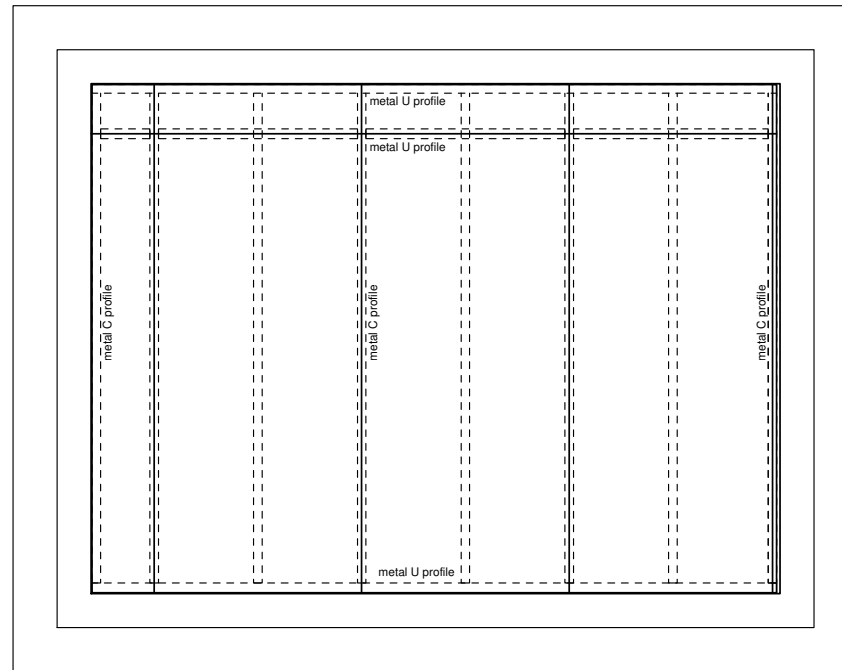
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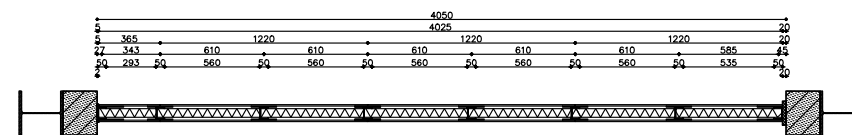
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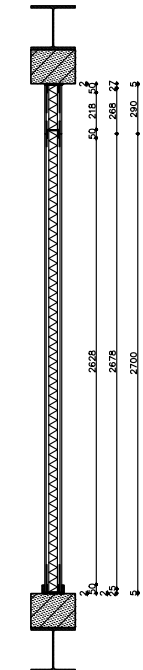
Appendix 1 Drawings



ELEVATION



HORIZONTAL SECTION



VERTICAL SECTION

WALL COMPOSITION:

- 9mm Sinhboard.
- 150mm wide strips of Sinhboard (6mm) fastened individually to metal profiles.
- Metal C(vertical) and U(horizontal) profiles 50x70mm filled with Rockwool 210.
- Rockwool 210 panel 70mm thick.
- 150mm wide strips of Sinhboard (6mm) fastened individually to metal profiles.
- 9mm Sinhboard.

GENERAL:

Sinhboard mounted with drywall screws TN of sufficient length.
(3,5x35mm screws in strips and 3,5x45mm screws in panels)
Distance between screws smaller than 250mm centre to centre.

EDGES TESTING FRAME:

top & bottom edge:

- elastic fire resistant silicone adhesive, Nullifire FS 703, adhered to front and back
- Knauf sealing tape min. 50mm wide

left side edge:

- elastic fire resistant silicone adhesive, Nullifire FS 703, adhered to front and back
- Knauf sealing tape min. 50mm wide

right side (with a free edge of 20mm):

- cavity filled with Rockwool 211 squeezed between stud and concrete edge.

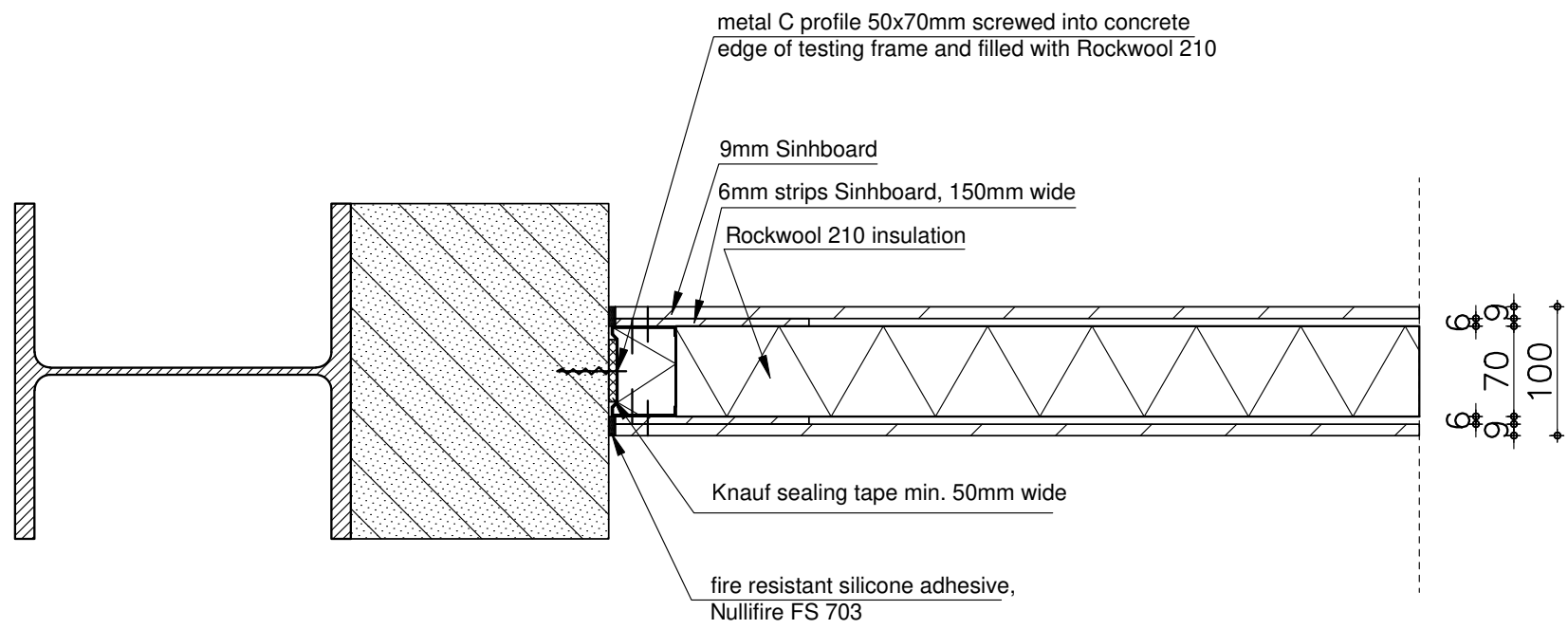
GENERAL

Steel profile frame is mounted to the testing frame with nail plugs, 6x60mm.

Nail plugs along top and bottom edges are positioned between 400 and 500mm (centre to centre).

Nail plugs along side edges are positioned max. 1m apart, with a minimum of 3 plugs.

Appendix 1 Drawings



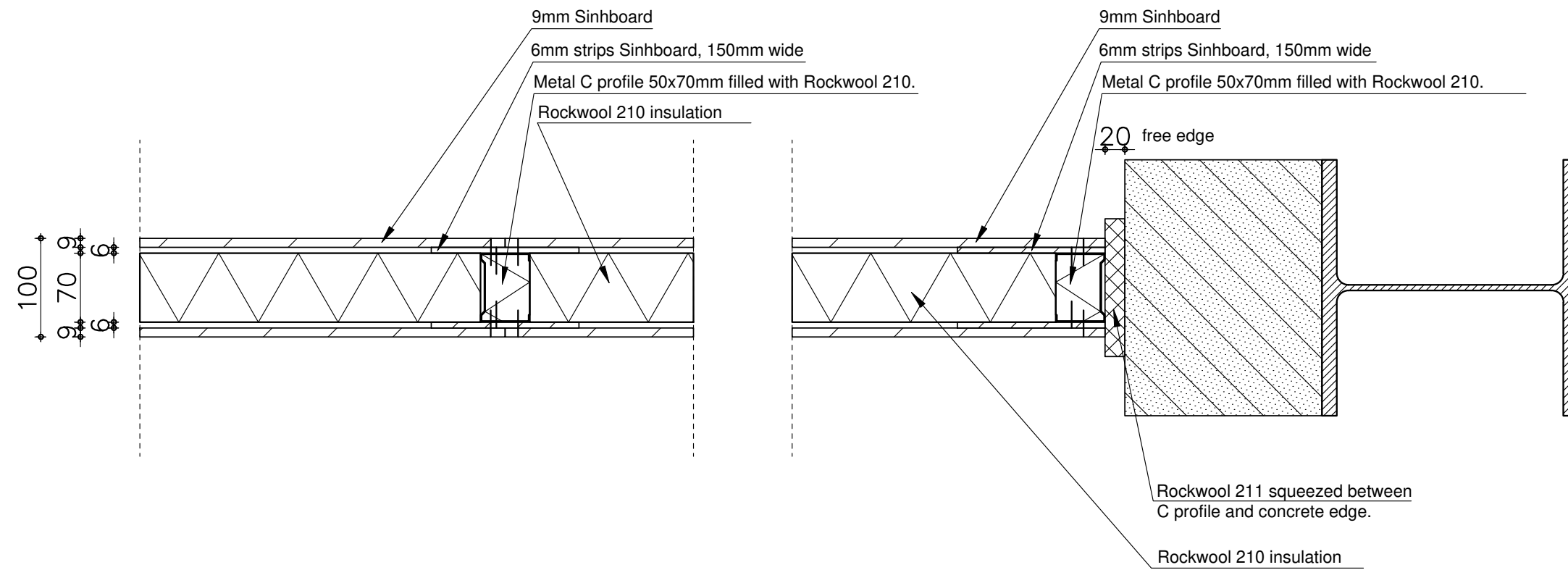
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Appendix 1 Drawings

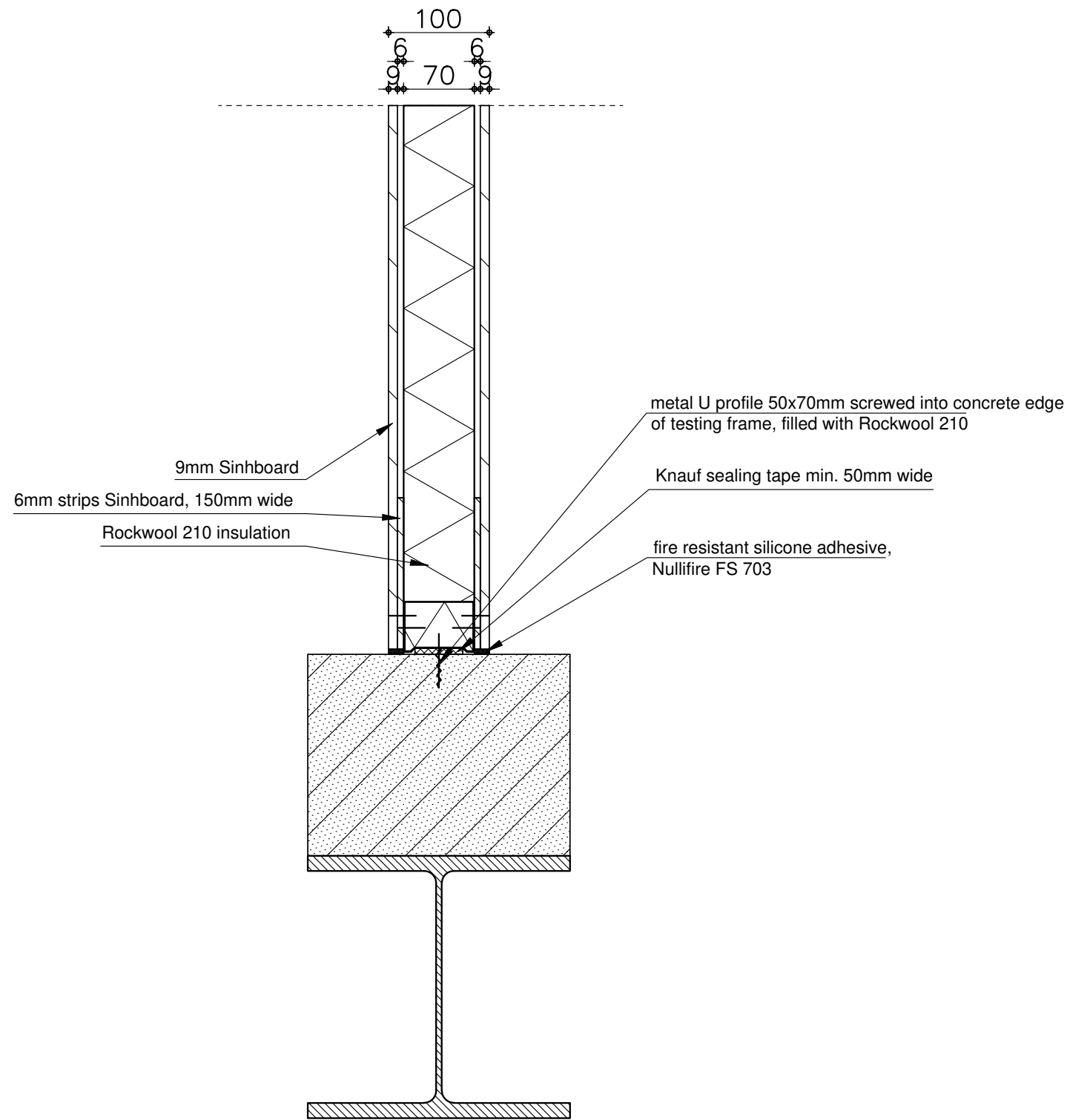


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Appendix 1 Drawings



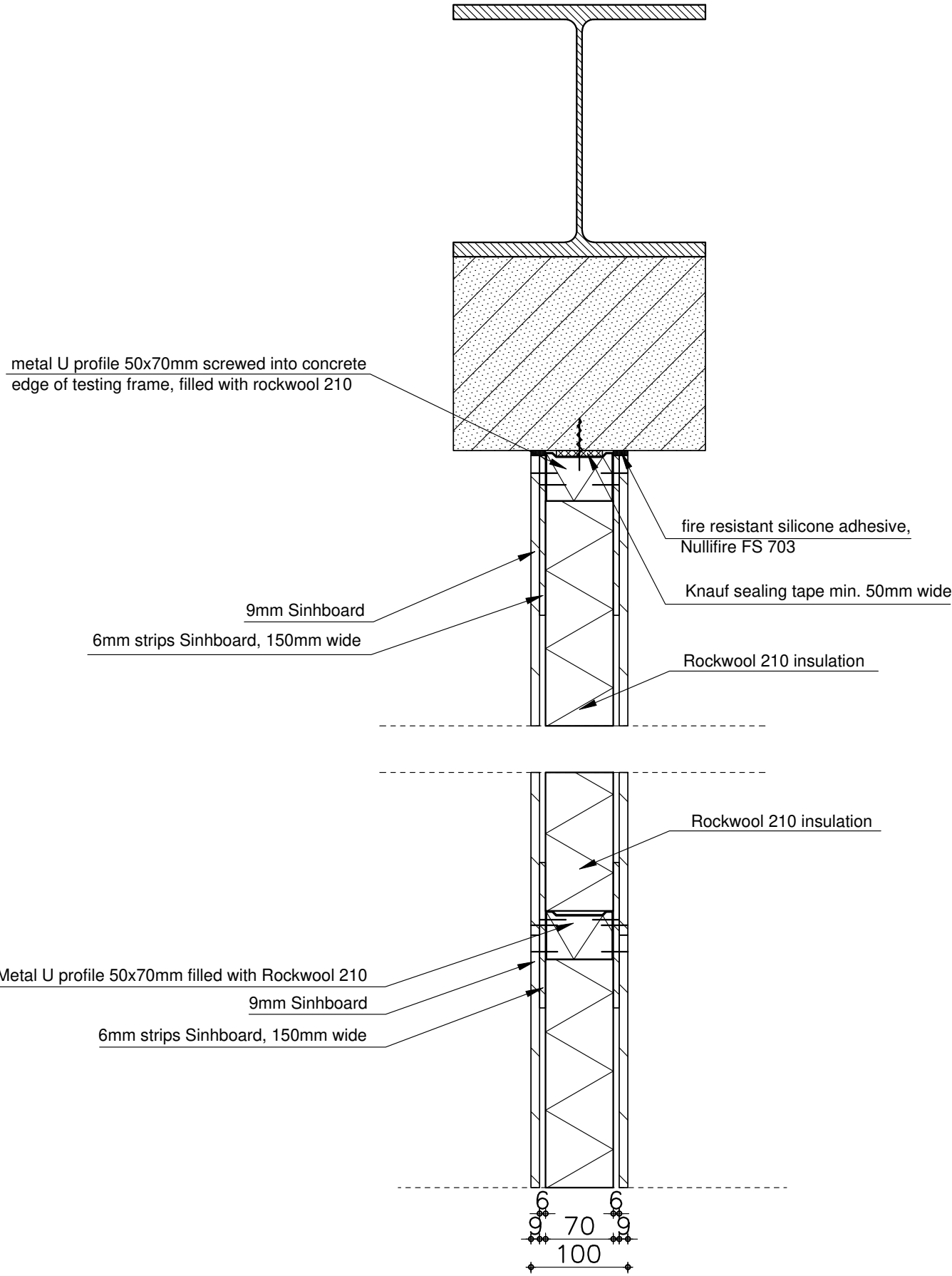
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Appendix 1 Drawings



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