PEUTZ

Laboratory for Firesafety

Classification of fire resistance of a Sinhboard wall with wooden studs in accordance with EN 13501-1:2007+A1:2009

Report number YA 1694-1E-RA d.d. 12 April 2016

Laboratory for Firesafety

Classification of fire resistance of a Sinhboard wall with wooden studs in accordance with EN 13501-1:2007+A1:2009

Sponsor	Withindia BV Oosteinde 26 2271 EH Voorburg
Prepared by	Peutz bv Lindenlaan 41 6584 AC Molenhoek Postbus 66 6585 ZH Mook
Notified Body no.	2264
Product name	Sinhboard wall with wooden studs
Report number	YA 1694-1E-RA
Date	12 April 2016
Reference	JM/MJa/AvdS/YA 1694-1E-RA
Representative	ir. J.J. Mertens
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This classification report consists of 9 pages and an appendix of 6 pages and may only be used or reproduced in its entirety.

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1 Introduction

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

TESTEN
RvA L 505

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**: **E**uropean **A**ccreditation Organisation **M**ulti**L**ateral **A**greement: 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 wooden studs, is defined as a non-loadbearing wall.

2.2 Product description

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

The tested element consists of vertical wooden studs and horizontal wooden profiles. The wooden studs and profiles have been mounted to the testing frame with nail plugs (6x60 mm). On both sides of the vertical wooden studs and horizontal wooden 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 rock wool (Rockwool RW210, 70 mm). A second layer of Sinhboard (9 mm) has been mounted on both sides with drywall screws (3,5x55 mm). Finally the construction has been finished with Nullifire FS 703 at the bottom, fixed edge and top.

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 1694-1E-RA-001 dated 12-04-2016	EN 1363-1:2012 EN 1363-2:1999 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		– Cotton pad	95 min*
		– Gap gauges	95 min*
		– Sustained flaming	95 min*
	Thermal insulation (I)		
		– Average temperature rise	91 min
		– Maximum temperature rise	85 min

The test was finished after 95 minutes in consultation with the sponsor. After finishing the test, the criteria marked with a '*' where not reached yet.

The maximum temperature after a test duration of 90 minutes is approximately 240 °C. Therefore in accordance with EN 1363-2:1999 the radiation emitted from the specimen will be less than 15 kW/m^2, since the maximum temperature is less than 300 °C.

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 wooden studs, is classified according to the following combinations of performance parameters and classes as appropriate.

Fire resistance classification
EI 60 **EW 90** **E 90**

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;
- 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 an 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 90 minutes test duration was less than 100 mm the construction may be applied to a height of 4 m, provided that the expansion possibilities are increased proportionally.

5 Limitations

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

Mook,

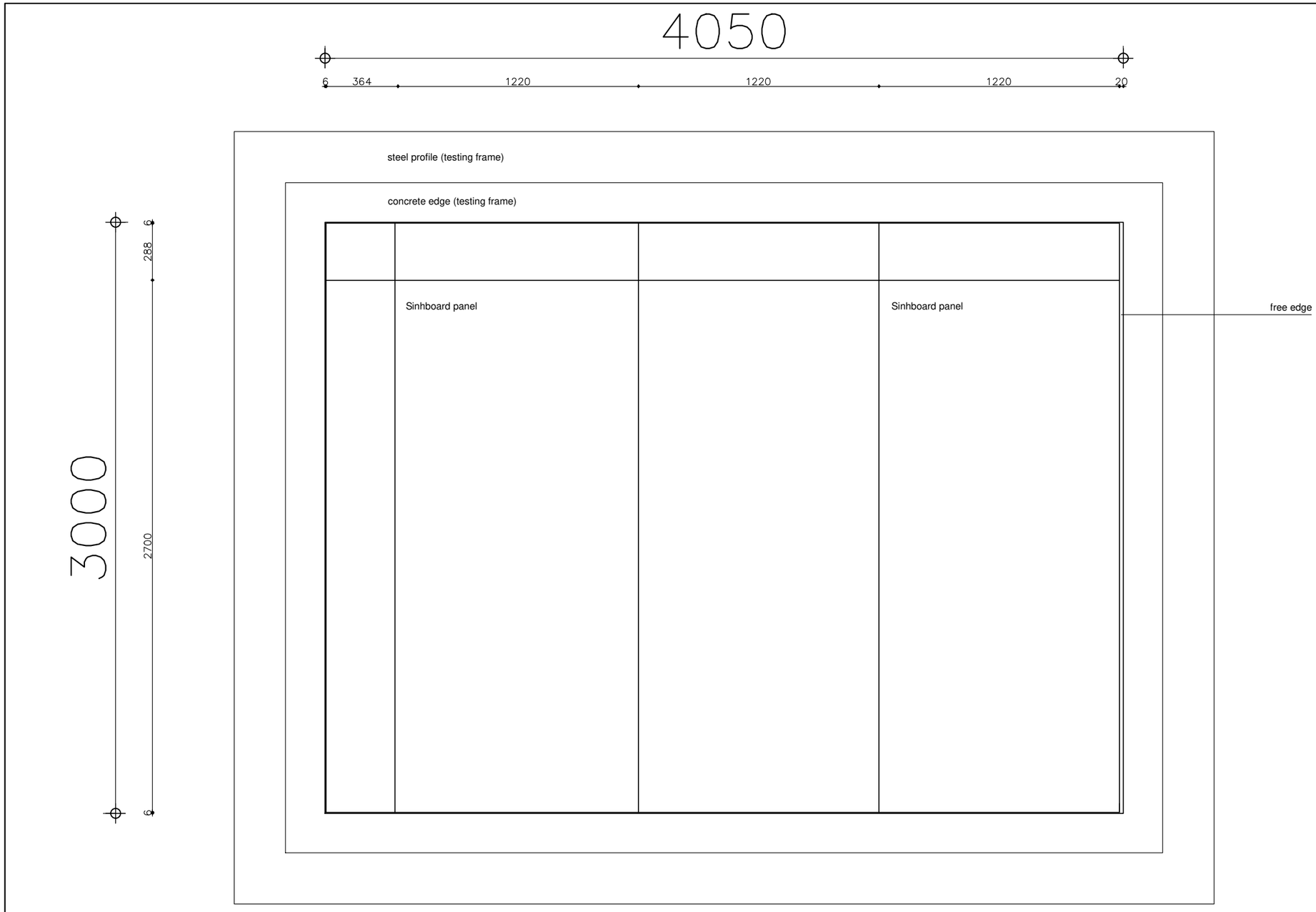
Ir. J.J. Mertens

Head of Laboratory for Fire Safety

Ing. D.J. den Boer

Management

This report contains 9 pages and 1 appendix:
Appendix 1 Drawings (6 pages).



ELEVATION TEST WALL

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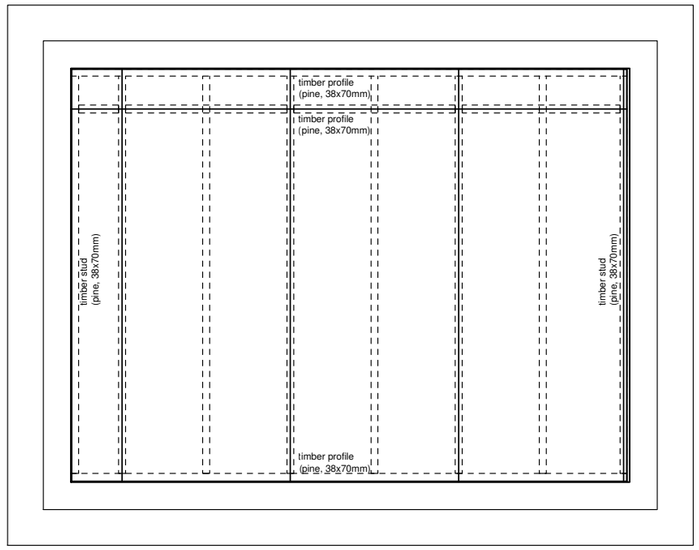

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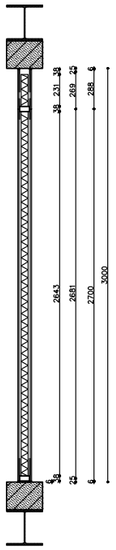
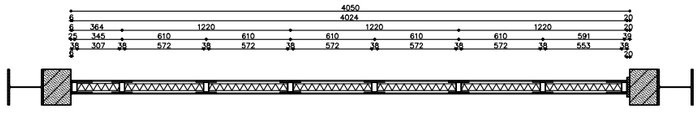


VERTICAL SECTION



HORIZONTAL SECTION

WALL COMPOSITION:

- 9mm Sinhboard.
- 150mm wide strips of Sinhboard (6mm) fastened individually to timber studs and profiles.
- Timber studs and profiles 38x70mm
- Rockwool 210 panel 70mm thick.
- 150mm wide strips of Sinhboard (6mm) fastened individually to timber studs and profiles.
- 9mm Sinhboard.

GENERAL:

Sinhboard mounted with drywall screws TN of sufficient length.
(3,5x35mm screws in strips and 3,5x55mm 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 2x30mm wide

left side edge:

- elastic fire resistant silicone adhesive, Nullifire FS 703, adhered to front and back
- Knauf sealing tape 2x30mm wide

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

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

GENERAL

Timber frame is mounted to the testing frame with nail plugs, 6x60mm.
Nail plugs along top and bottom edges are positioned between 400 and 500mm apart (centre to centre).
Nail plugs along side edges are positioned max. 1m apart, a minimum of 3 plugs.

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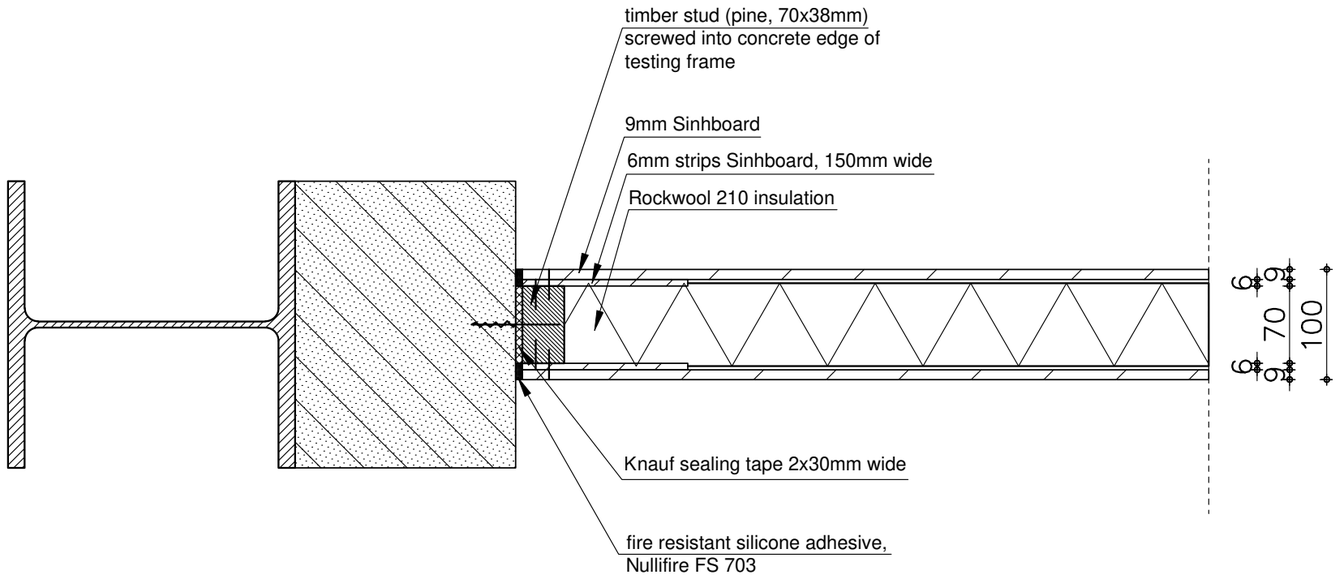

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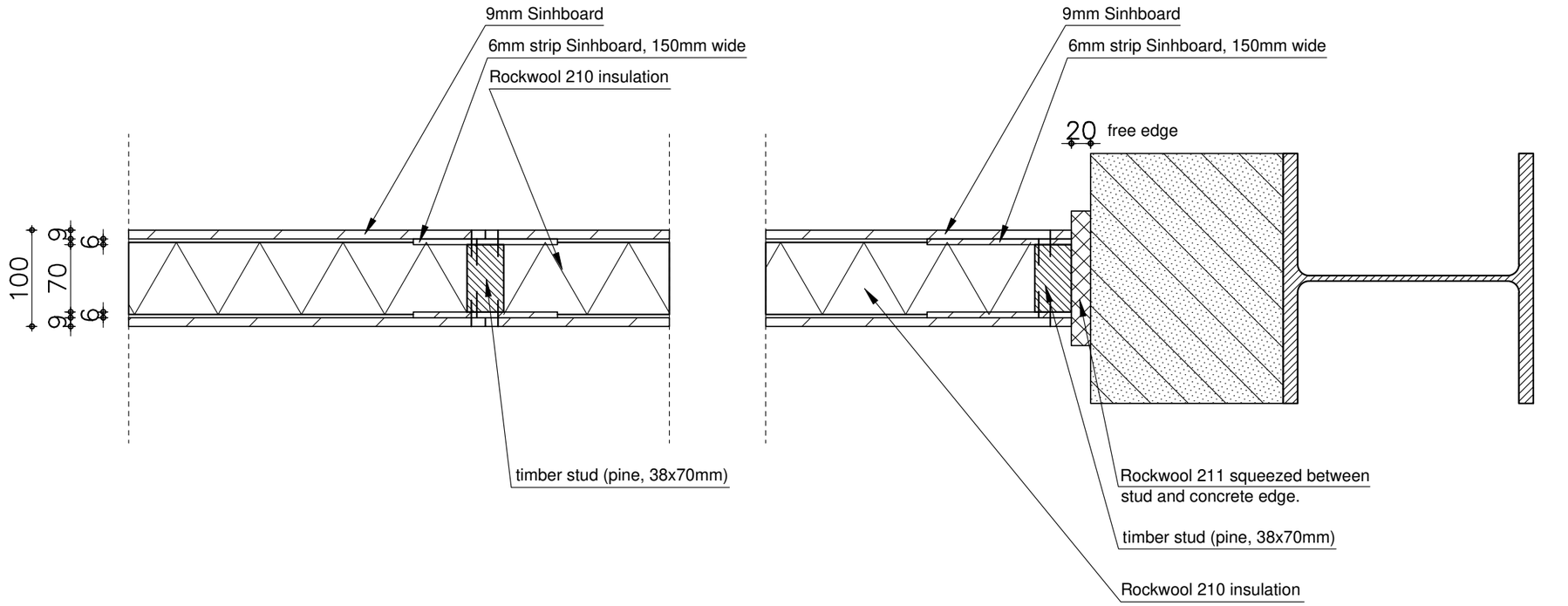

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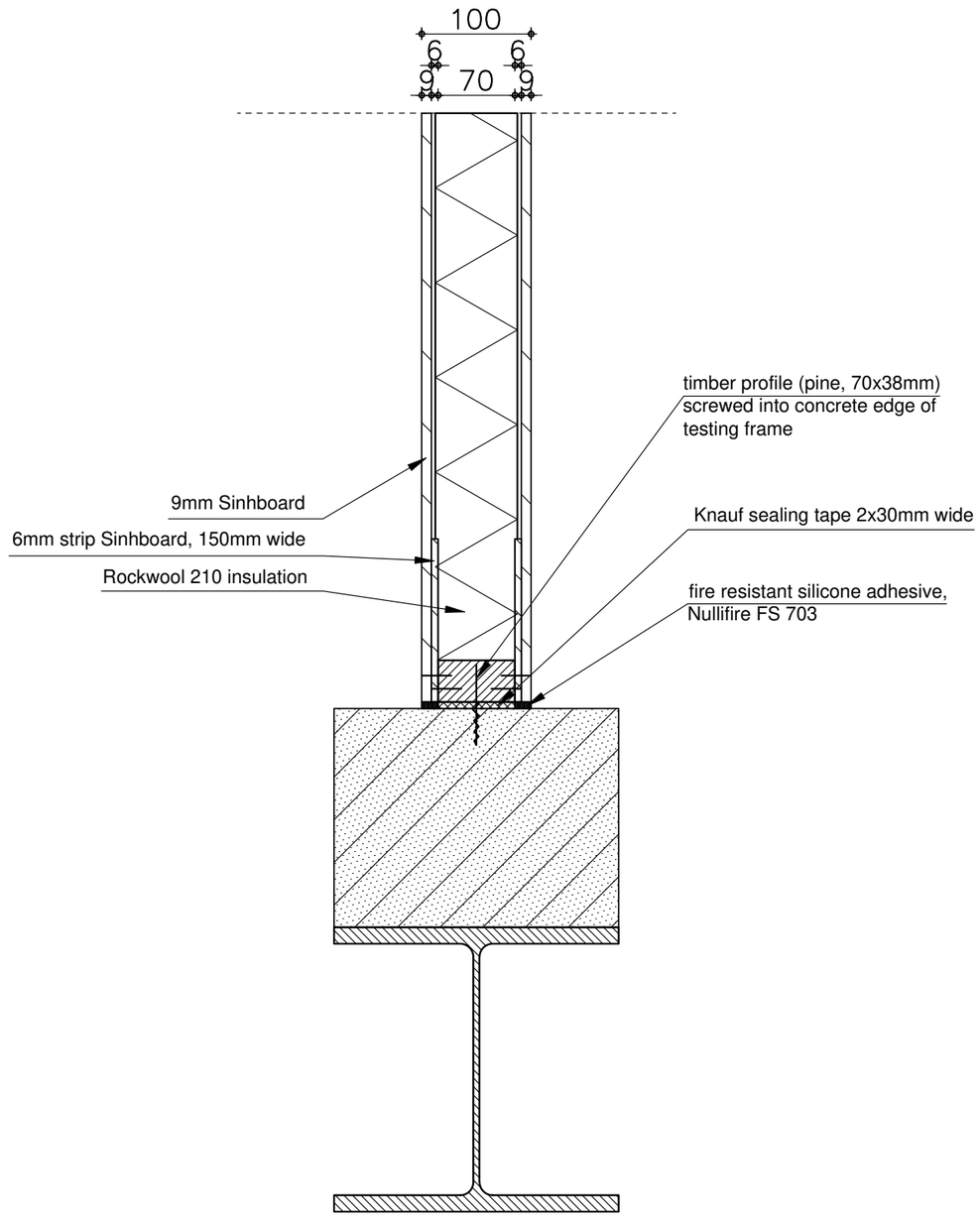

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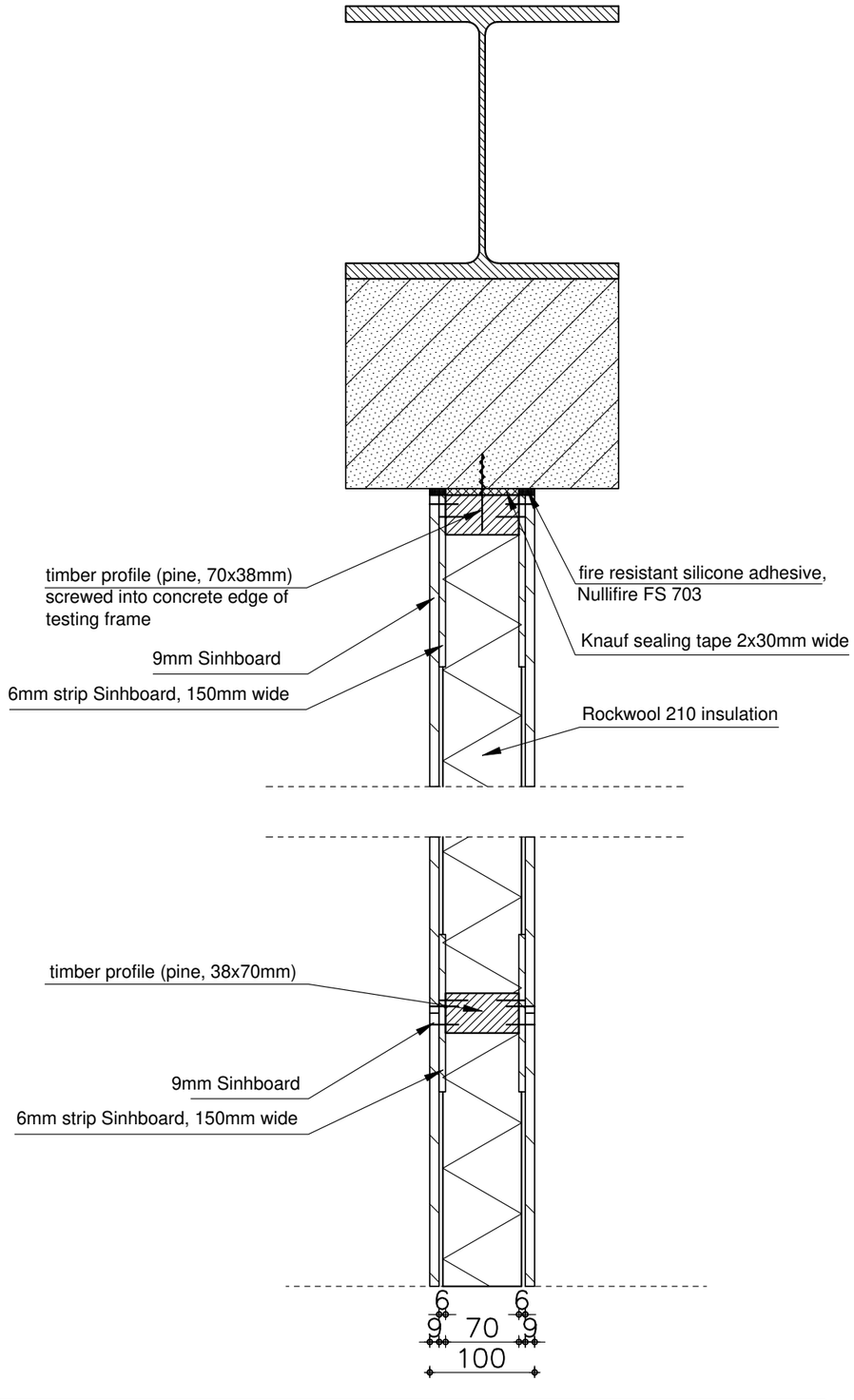

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