GRYFITLAB

Spółka z o.o.
ul. Prosta 2, Łozienica
72-100 Goleniów

GROUP OF TESTING LABORATORIES
GRYFITLAB

Fire Tests Laboratory
ul. Prosta 2, Łozienica
72-100 Goleniów
Tel. 607-900-483

CLASSIFICATION OF FIRE RESISTANCE

IN ACCORDANCE WITH EN 13501-2+A1:2009

Sponsor:	SINIAT B.V. Postbus 45 NL-9930 AA Delfzijl THE NETHERLANDS
Prepared by:	Fire Tests Laboratory GRYFITLAB Spółka z o.o. ul. Prosta 2, Łozienica 72-100 Goleniów
Notified Body No.:	NB 2253
Product name:	Partition wall, double-sided cladded with gypsum plasterboards LaDura Premium type DEFH1IR (thickness: 1x12.5 mm), with a framework made of steel profiles NIDA Standard C/U 50x0.5, filled with 50 mm thick mineral rock wool Rockmin (density: 30 kg/m^3) manufactured by Rockwool
Classification Report No.:	LBO-159-K/14E
Issue number:	1
Date of issue:	29.08.2014

Copy No. 1
This classification report consists of 4 pages and has 2 annexes. Annex 1 consists of 1 page. Annex 2 consists of 6 pages.
The report was printed in 3 copies. Copies Nos. 1, 2 – for the Sponsor, Copy No. 3 – AA

1. INTRODUCTION

This classification report defines the resistance to fire classification assigned to element "Partition wall, double-sided cladded with gypsum plasterboards LaDura Premium type DEFH1IR (thickness: 1x12.5 mm), with a framework made of steel profiles NIDA Standard C/U 50x0.5, filled with 50 mm thick mineral rock wool Rockmin (density: 30 kg/m^3) manufactured by Rockwool" in accordance with the procedures given in EN 13501-2+A1:2009.

2. DETAILS OF CLASSIFIED PRODUCT

2.1 General

The element, "Partition wall, double-sided cladded with gypsum plasterboards LaDura Premium type DEFH1IR (thickness: 1x12.5 mm), with a framework made of steel profiles NIDA Standard C/U 50x0.5, filled with 50 mm thick mineral rock wool Rockmin (density: 30 kg/m^3) manufactured by Rockwool" is defined as a non-loadbearing element of the building.

2.2 Description

The element, is fully described below.

The dimensions of the wall are as follows: height – 3 700 mm, width – 3 000 mm, thickness – 75 mm. The double-sided cladding of the wall is made of gypsum plasterboards LaDura Premium type DEFH1IR (thickness: 1x12.5 mm) manufactured by SINIAT. The interior of the wall is filled with 50 mm thick mineral rock wool Rockmin manufactured by Rockwool. The measured surface density of boards is 12.8 kg/m^2. The measured volume density of rock wool is 30.0 kg/m^3. The framework elements of the wall are made of cold bent galvanized steel profiles type NIDA Standard C 50x0.5 and NIDA Standard U 50x0.5. The studs are placed at 625 mm centres. Gypsum plasterboards LaDura Premium type DEFH1IR are fixed to the profiles by means of self drilling screws NIDA Ø 3.5 mm x 25 mm, placed at 25 cm centres. The joints between the boards as well as the screw heads are filled with gypsum plaster NIDA Hydromix manufactured by SINIAT. A glass fibre reinforcing tape is used at the joints between particular boards. 3 mm thick and 50 mm wide sealing tape for acoustic insulation NIDA is placed along the horizontal edges and the vertical edge of the wall, at their joint with the masonry and the lintel beam.

Profiles NIDA Standard U 50x0.5 are fixed to the supporting construction by means of steel wall plugs NIDA Ø 6 mm x 40 mm driven at 100 cm centres. One of the edge profiles, NIDA Standard C 50x0.5, is fixed to the supporting construction by means of steel wall plugs NIDA Ø 6 mm x 40 mm driven at 100 cm centres while the other vertical edge of the wall (the right hand side one, looking in the direction of the furnace) is left free.

The element is mounted in the standard low density rigid construction, a 240 mm thick wall, made of aerated concrete blocks.

The construction of the classified wall is presented in Annex 1 in Figures 1÷4.

3. TEST REPORT AND TEST RESULTS IN SUPPORT OF THE CLASSIFICATION

3.1 Test report

Name of laboratory	Name of sponsor	Report ref. no. and issue date	Test method
Fire Tests Laboratory GRYFITLAB Spółka z o.o. Poland	Lafarge Gips Sp. z o.o. ul. Iłżecka 24 02-135 Warszawa	LBO-159/10E 17.12.2010	PN-EN 1364-1:2001

3.2 Results

Test method, number and issue date	Parameter	Results
PN-EN 1364-1:2001 LBO-159/10E 17.12.2010	**Test duration**	**75 minutes 41 seconds**
	Integrity: - cotton pad - gap gauges - sustained flaming	 75 minutes, no failure 75 minutes, no failure 75 minutes, no failure
	Thermal insulation: - mean temperature rise - maximum temperature rise	 75 minutes, no failure 75 minutes
	Deflection:	>100 mm

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1 Reference of classification

This classification has been carried out in accordance with Clause 7 of EN 13501-2+A1:2009.

4.2 Classification

The element, "Partition wall, double-sided cladded with gypsum plasterboards LaDura Premium type DEFH1IR (thickness: 1x12.5 mm), with a framework made of steel profiles NIDA Standard C/U 50x0.5, filled with 50 mm thick mineral rock wool Rockmin (density: 30 kg/m^3) manufactured by Rockwool", is classified according to the following combinations of performance parameters and classes as appropriate.

R	E	I	W		t	t	-	M	S	C	IncSlow	sn	ef	r
	E	**I**			**6**	**0**								

Fire resistance classification: EI 60

4.3 Field of application

This classification is valid for the following end use applications in accordance with EN 1364-1:1999:

- Both directions,
- Decrease in height,
- Increase in the thickness of the wall,
- Increase in the thickness of component materials,
- Decrease in linear dimensions of boards but not thickness,
- Decrease in stud spacing,
- Decrease in the distance of fixing centres,
- Increase in the number of horizontal joints,
- Increase in the width.

4.4 Supporting construction

The result of a test of a non-loadbearing wall tested in one of the standard supporting constructions given in EN 1363-1:2012, or the test frame, is applicable to any other supporting construction within the same type (i.e. rigid, low density rigid or flexible) that has a greater fire resistance (i.e. thicker, of greater density, having more layers of boards, as appropriate).

5. LIMITATIONS

This classification is valid as long as:

- The test method remains unchanged,
- Changes in the construction and materials meet the limitations specified in item 4.3.

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

APPROVED

M Kamińska

Maria Kamińska (Laboratory Manager)

TO WHOM IT MAY CONCERN

SUBJECT: GYPSUM RELATED KNOW-HOW, INTELLECTUAL PROPERTY RIGHTS, TEST REPORTS, CERTIFICATES

We hereby confirm that the sale by Lafarge of its European Gypsum Operations to the Etex Group, which took place on 4 November 2011, has provided that the Etex Group owns all intellectual property rights, gypsum related know-how, internal and external test reports, certificates which had been developed and were owned by the former Lafarge Gypsum Division, including by all its European companies, its Technical Development Centre, and its research centre, Lafarge Research Centre, for this perimeter, at the time of sale.

Subsequently, all European companies which used to be named "Lafarge Plâtres" or "Lafarge Plasterboard" or "Lafarge Gips" or "Lafarge Gessi" and so on, have changed name and are now called Siniat. Siniat is the new name of the Gypsum Division of the Etex Group. The Technical Development Centre of the ex-Lafarge Gypsum Division is now part of Siniat International SAS.

As a result of that, all Siniat companies in Europe are entitled to use the same rights and know-how mentioned above to conduct their business.

Avignon,
14th March 2013

Christophe David

Head of Innovation and R&D

GRYFITLAB Sp. z o.o.
Zespół Laboratoriów
Badawczych Gryfitlab
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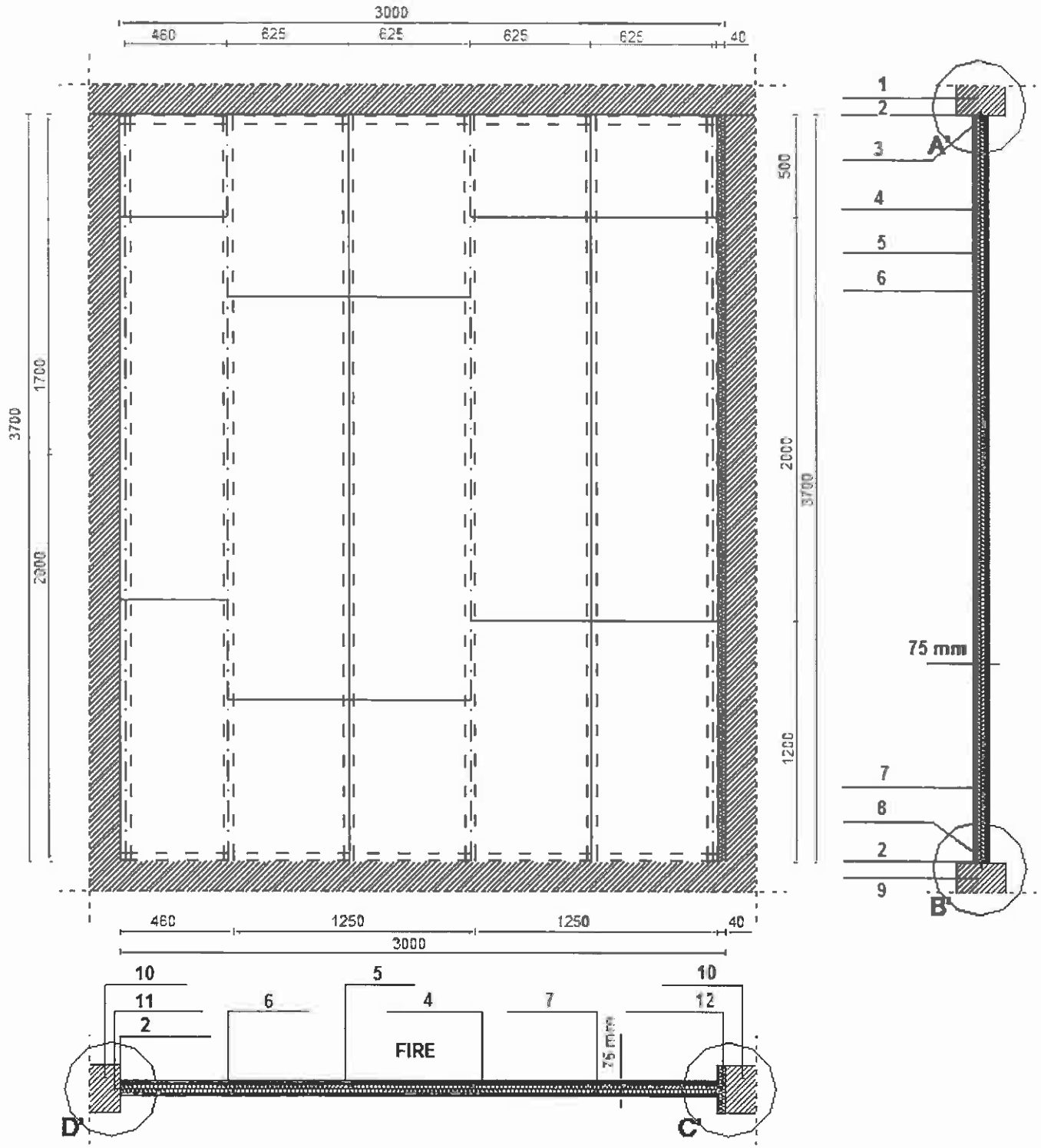
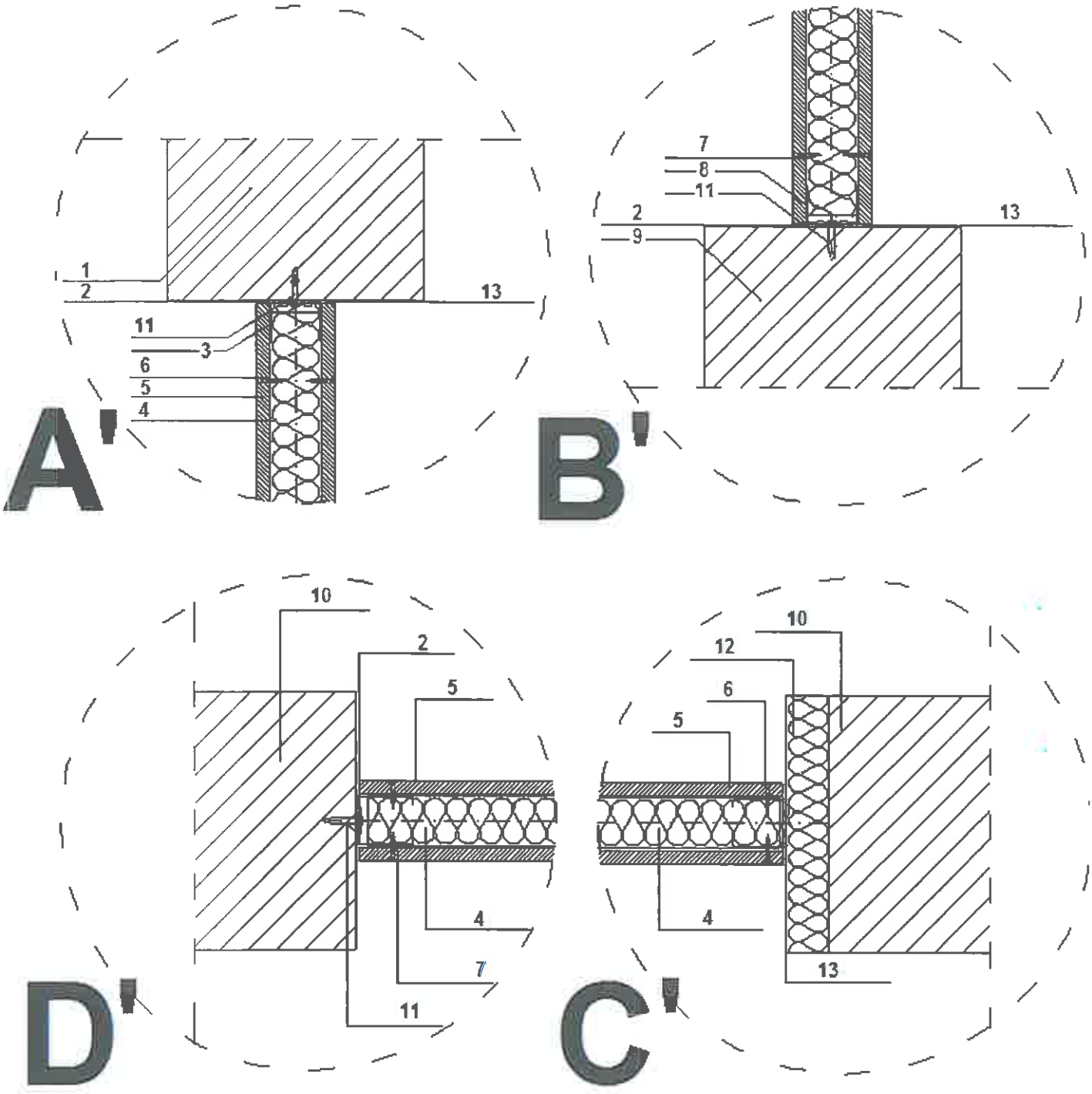
Annex 2

Technical documentation of the test specimen



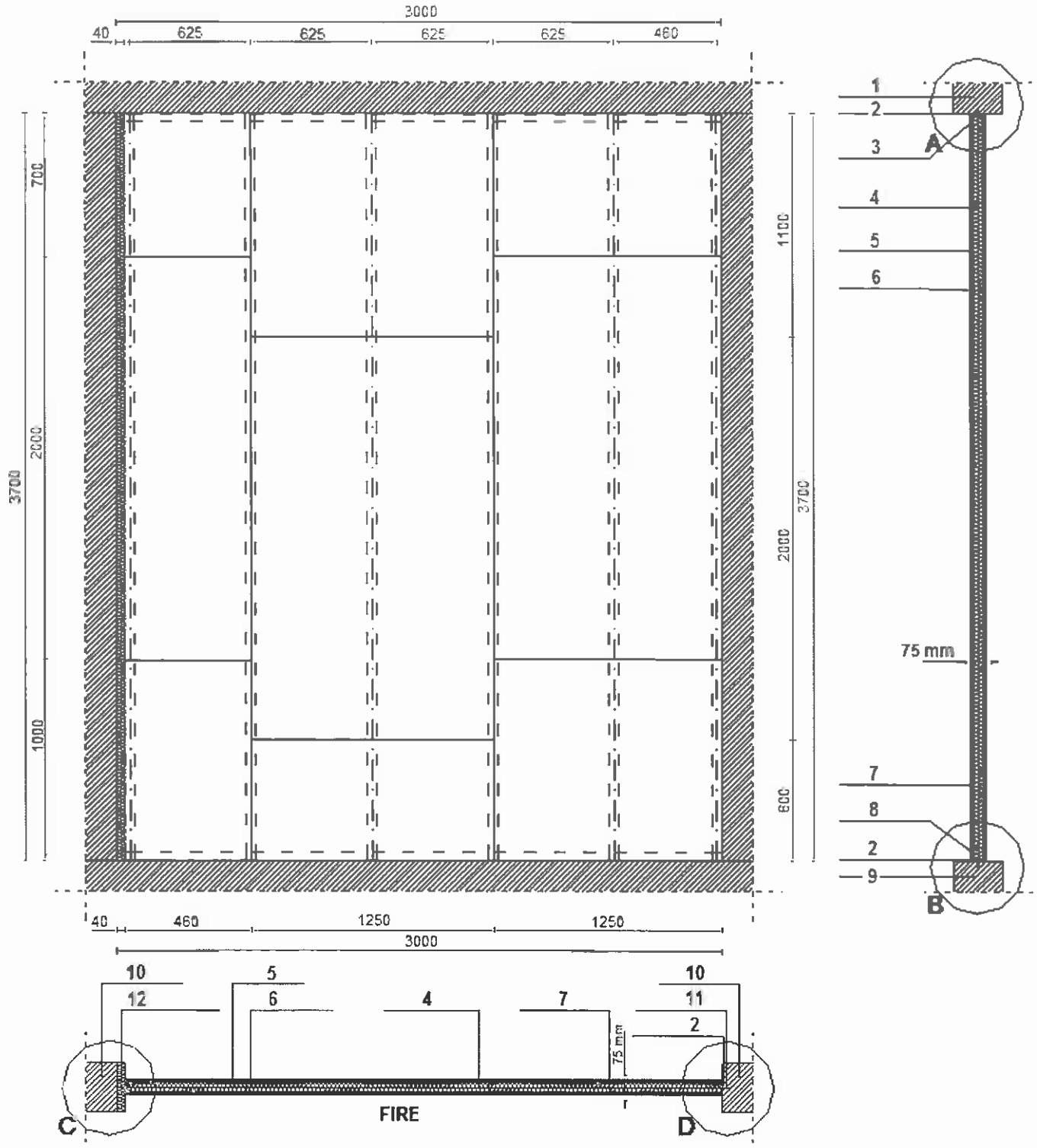
Partition wall NIDA in SINIAT system
System: NIDA Ściana 75A50
Cladding: LaDura Premium 1x12.5 mm (double sided) manufactured by SINIAT
Filling: Mineral rock wool Rockmin 50 mm, manufactured by Rockwool

Figure 1 Test specimen – the unexposed side view (identifiers of particular components of the test specimen are specified in Table 1 herein)



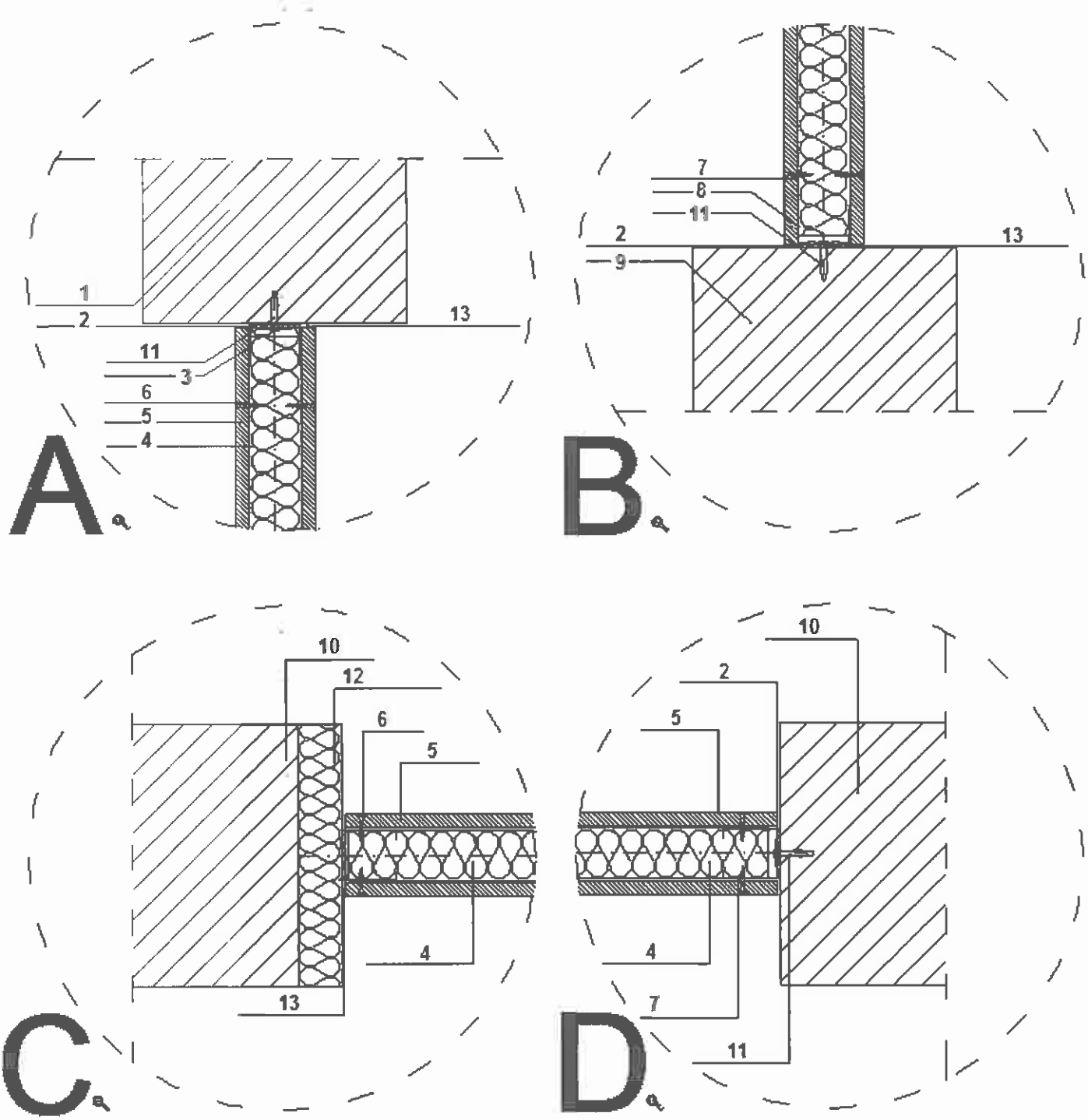
Partition wall NIDA in SINIAT system
System: NIDA Ściana 75A50
Cladding: LaDura Premium 1x12.5 mm (double sided) manufactured by SINIAT
Filling: Mineral rock wool Rockmin 50 mm, manufactured by Rockwool

Figure 2 Test specimen. Details: A', B', C' and D' (identifiers of particular components of the test specimen are specified in Table 1 herein)



Partition wall NIDA in SINIAT system
System: NIDA Ściana 75A50
Cladding: LaDura Premium 1x12.5 mm (double sided) manufactured by SINIAT
Filling: Mineral rock wool Rockmin 50 mm, manufactured by Rockwool

Figure 3 Test specimen – the exposed side view (identifiers of particular components of the test specimen are specified in Table 1 herein)



Partition wall NIDA in SINIAT system
System: NIDA Ściana 75A50
Cladding: LaDura Premium 1x12.5 mm (double sided) manufactured by SINIAT
Filling: Mineral rock wool Rockmin 50 mm, manufactured by Rockwool

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Figure 4 Test specimen. Details: A, B, C and D (identifiers of particular components of the test specimen are specified in Table 1 herein)

Table 1 Components of the test specimen

Identifier of the component	Description of the component
1	Solid lintel of reinforced concrete
2	Sealing tape for acoustic insulation NIDA 50 mm
3	Head profile NIDA U50
4	Mineral rock wool Rockmin (thickness: 50 mm, manufacturer: Rockwool)
5	Gypsum plasterboard LaDura Premium 1x12.5 mm (manufacturer: SINIAT)
6	Self drilling screws NIDA 3.5x25 at 250 mm centres
7	Studs – profile NIDA C50, at 625 mm centres
8	Floor profile NIDA U50
9	Solid foundation
10	Solid pillar (thickness: 240 mm)
11	Steel wall plug NIDA 6/40 mm, at 1000 mm centres
12	Free edge. Mineral rock wool (thickness: 40 mm)
13	Finishing with gypsum plaster NIDA Hydromix

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