CLASSIFICATIERAPPORT EEA-21-128-Rev1 & EEA-21-129-Rev1

SCHACHTWAND MET 2X15 MM A1 COREX

Rapport	Vuurzijde	Resultaat
EEA-21-128-Rev1	De plaatzijde	EI60
EEA-21-129-Rev1	De niet-plaatzijde	EI60

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- in de breedte onbeperkt toepasbaar

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verkoop@fireproof.nl
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IBAN NL40 INGB 0007 4169 87
BIC INGBNL2A

EFECTIS ERA AVRASYA

TEST VE BELGELENDİRME A.Ş.

Fire Test Laboratory

Test
TS EN ISO/IEC 17025
AB-0556-T

AB-0556-T
EEA-21-128-Rev1
10-22

CLASSIFICATION OF FIRE RESISTANCE PERFORMANCE

IN ACCORDANCE WITH EN 13501-2:2016

Sponsor : DALSAN ALÇI SAN. VE TİC. A.Ş.
Kızılcaşar Mahallesi, 1184. Cadde, No:22/1 İncek, Gölbaşı, Ankara/TURKEY

Prepared by : EFECTIS ERA AVRASYA Test ve Belgelendirme A.Ş. Dilovası OSB 5. Kısım Fırat Cad. No: 18, 41455 Dilovası, Kocaeli/TURKEY

Product name : Shaft Wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework

Classification report no. : EEA – 21 – 128 – Rev1

Issue number : 1/2

Date of issue : 11.10.2022

Remark : This report supersedes the previous report No. EEA-21-128 due to its validity date removed.

This classification report consists of 11 pages and may only be used or reproduced in its entirety.

Address: Dilovası OSB 5. Kısım Fırat Cad. No: 18, 41455 Dilovası, Kocaeli/TURKEY
Phone: 0262 6581662 Fax: 0262 6581669 E-mail: turkey@efectis.com
Web: www.efectis.com

1. INTRODUCTION

This classification report defines the classification in accordance with the procedures given in EN 13501-2:2016, assigned to shaft wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework.

2. DETAILS OF CLASSIFIED PRODUCT

2.1. Description

Shaft wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework is fully described below.

2.2. General

Product identification : Shaft wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework.

Direction of the fire : Plasterboards on the exposed face of the framework

Manufacturer : DALSAN ALÇI SAN. VE TİC. A.Ş.
Gebze Güzeller OSB İnönü Mah. Ziya Gökalp Cad. No: 4, 41400 Gebze, Kocaeli/TURKEY

Sponsor of test : DALSAN ALÇI SAN. VE TİC. A.Ş.
Kızılcaşar Mahallesi, 1184. Cadde, No:22/1 İncek, Gölbaşı, Ankara/TURKEY

2.3. Construction

Partition wall system consisted of plasterboards mounted on the steel framework. Double layer of "A1 COREX 15 mm" plasterboards were placed on one face of the framework. Total thickness of the partition is 105 mm.

One vertical edge was mounted as in practise and the other vertical edge was constructed as a free edge to simulate a wider wall construction in practise.

2.4. Components

2.4.1. Framework

- *Edge and intermediate studs:*
  - *Type : DC 75 profile galvanized steel EN 14195*
  - *Dimensions : 2990 x 74 x 47/47 x 0,6 mm (h x d x w x t)*
  - *Fixing:*
    - *Type : Steel screws and steel dowels*
    - *Location: 7 pieces. used on the fixed edge. Screws were fixed to the frame c.t.c 500 mm distances.*
    - *Dimensions*: M6 (dowel) / 6 x 45 mm (*Ø x l)*
- *The studs had 10 mm gap at top to let the profiles expand freely. From fixed edge the distances between the studs respectively; 550 mm, 600 mm, 600 mm, 600 mm and 600 mm.*
- *Top and bottom profile:*
  - *Type : DU 75 profile, galvanized steel EN 14195*
  - *Dimensions : 38/38 x 75 x 3000 x 0,5 mm (h x d x w x t)*
  - *Fixing:*
    - *Type : Steel screws and steel dowels*

- *Location: 7 pieces screws used each top and bottom profiles. The distance c.t.c between screws 500 mm and fixed profiles to top and bottom frame.*
- *Dimensions: M6 (dowel) / 6 x 45 mm (Ø x l)*

- *Insulation:*
  - *Type : Polyethylene foam resilient tape – DALSAN*
  - *Thickness : 3 mm.*
  - *Density : 30 kg/m³*
  - *Locations: Between DU and DC profiles and the supporting construction applied in profiles width.*

2.4.2. Plasterboards

- *Type : EN 15283-1, Tip GM FH1R Plasterboard – A1 COREX 15 mm; Manufacturer: DALSAN*
- *Nominal density : 900 ± 135 kg/m³*
- *Measured density : 881 kg/m³*
- *Nominal thickness : 15 mm*
- *Fire classification : A1*
- *Coating : Both faces of the plasterboards were covered with fiberglass mattress; unit area weight of fiberglass mattress on one face of the plasterboard 205 g/m².*

- *Nominal dimensions : 2000 x 1200 x 15 mm (h x w x t)*
  - *Locations of plasterboards:*
    - *First layer (1st layer) :*
      - *Vertical: Location of plasterboards from bottom respectively; 2000 mm and 1000 mm.*
      - *Horizontal: Location of plasterboards from free edge respectively; 600 mm, 1200 mm and 1150 mm.*
    - *Second layer (2nd layer) :*
      - *Vertical: Location of plasterboards from bottom respectively; 1000 mm and 2000 mm.*
      - *Horizontal: Location of plasterboards from free edge respectively; 1200 mm, 1200 mm and 550 mm.*

- *Fixing:*
  - *Type: Steel drywall screw*
    - *Dimensions : 3,5 x 38 mm (Ø x l) – For first layer – DALSAN*
      3,5 x 45 mm (Ø x l) – For second layer – DALSAN
    - *Location : Drywall screws were used for fixing plasterboards to DC and DU profiles. C.t.c distance of first layer 400 mm and C.t.c distance of second layer 300 mm.*

- *Filler:*
  - *Tip : Jointing compound – DERZTEK – EN 13963; Type: 3B Joint plater for filling and finish; Manufacturer: DALSAN*
  - *Dry unit volume weight: 750 kg/m³*

– *Reinforcement : Self-adhesive fiberglass joint tape – Joint tape; Manufacturer: DALSAN; Fiberglass joint tape unit area weight: 65 g/m².*

– *Location : Used on joints of plasterboards and screwing points on second layer.*

*For detailed information see **Figure 1-5**.*

3. REPORTS AND RESULTS IN SUPPORT OF CLASSIFICATION

3.1. Reports

Name of laboratory	Name of sponsor	Test Report Reference No.	Test Method
EFECTIS ERA AVRASYA TEST VE BELGELENDİRME A.Ş.	DALSAN ALÇI SAN. VE TİC. A.Ş.	RFTR21188	EN 1364-1:2015

3.2. Results

Test method	Parameter	Results
EN 1364-1:2015	Integrity, [**E**] – Cotton pad – Gap gauges ∅ 6 mm ∅ 25 mm – Flames longer than 10 sec.	 no failure (not applied) no failure (not applied) no failure (not applied) not observed
	Insulation, [**I**] – Average temperature – Maximum temperature	 no failure 63rd minutes
Test was terminated at 64th minutes after consulted with sponsor of the test.		

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 13501-2:2016.

4.2. Classification

Shaft wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework 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

FIRE RESISTANCE CLASSIFICATION*

E 60, EI 60

***** *Valid for the direction of the wall given in the clause 2.2.*

4.3. Field of Application

4.3.1 General

This report details the method of construction, the test conditions and the results obtained when the specific elements of construction described herein was tested following the procedure outlined in EN 1363-1:2020, and when appropriate EN 1363-2:1999. Any significant deviation with respect to size, constructional details, load stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.

4.3.2 Specific conditions for dimensions and fixing

Test results 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.

- 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
- It is not allowed to increase the number of horizontal joints of the type tested
- Increase in the number of vertical joints, of the type tested.

4.3.3 Extension of height

The height of the construction may be increased to 4 meters for a fire resistance **60 minutes** for the criteria integrity and thermal insulation, because the lateral deflection of the construction is less than 100 mm.

4.3.4 Extension of width

The width of an identical construction can be increased, because the construction is tested with a width of 3 meters with one vertical free edge.

5. LIMITATIONS

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

Prepared by:	**Approved by**:
	
e-signed	*e- signed*
.....	.....
Yusuf ÜSTÜNDAĞ	Ali BAYRAKTAR
Person in the charge of the test	Laboratory Manager

6. DRAWINGS:

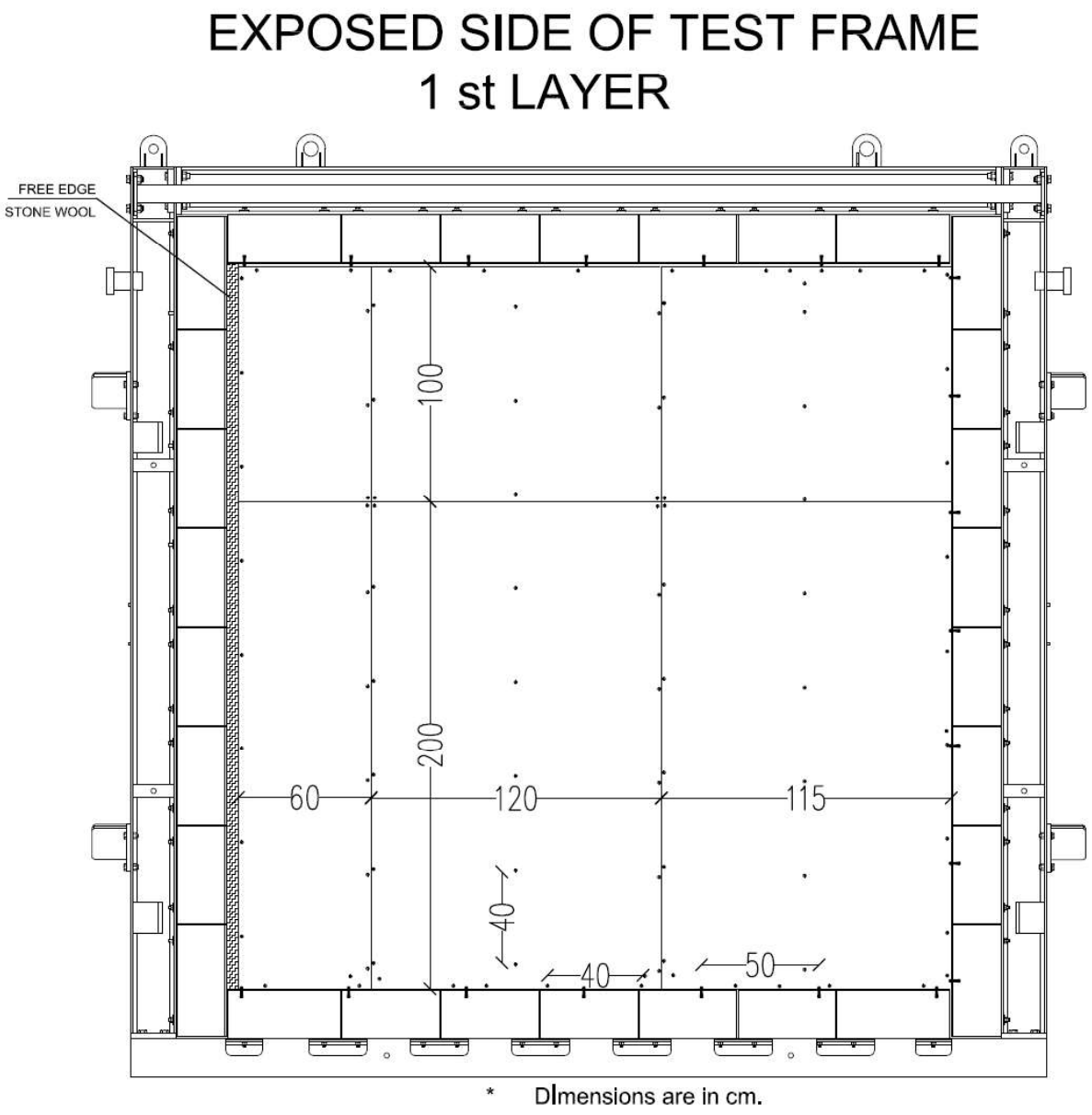


Figure 1: First layer view of exposed side of the test specimen.

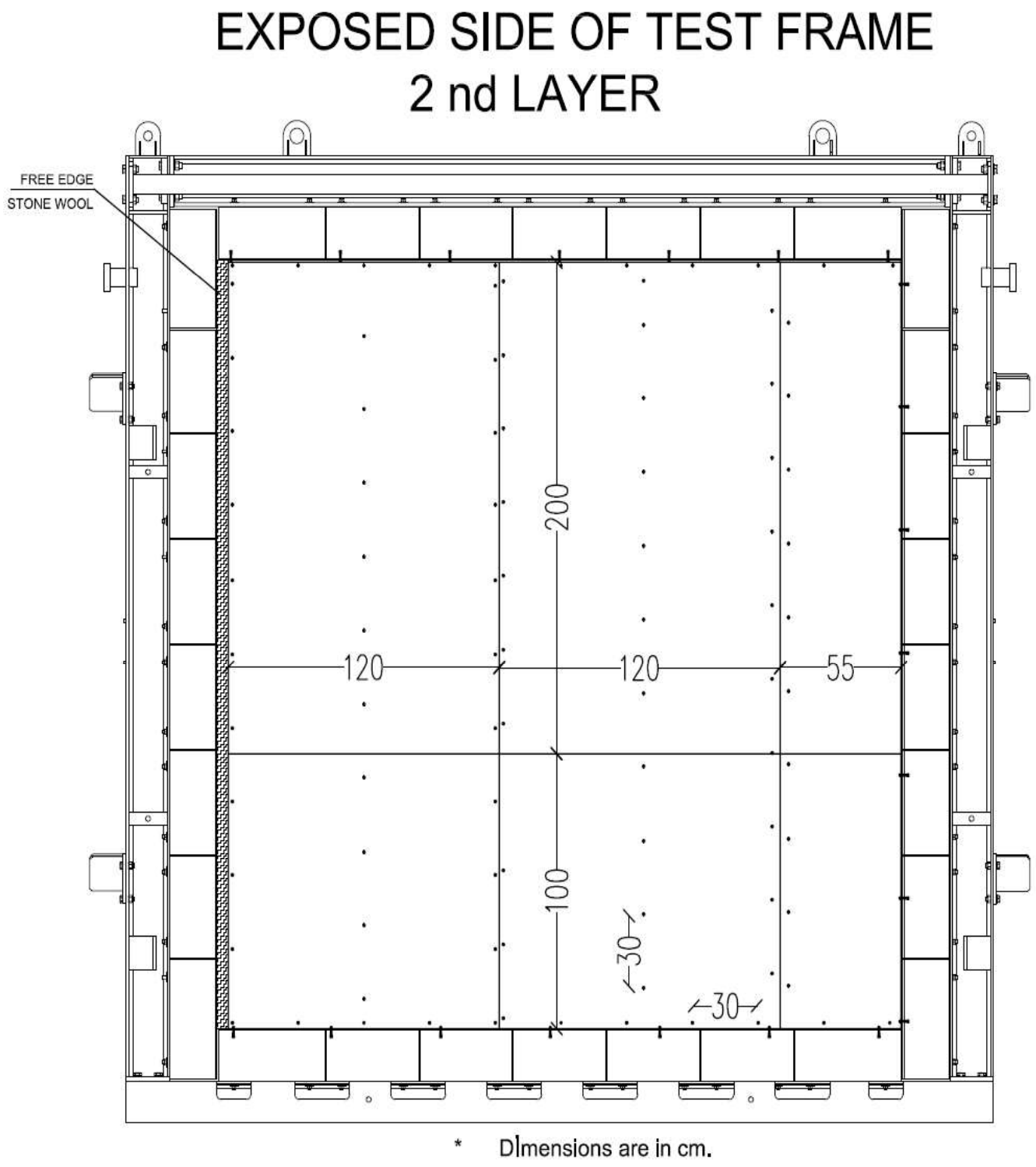


Figure 2: Second layer view of exposed side of the test specimen.

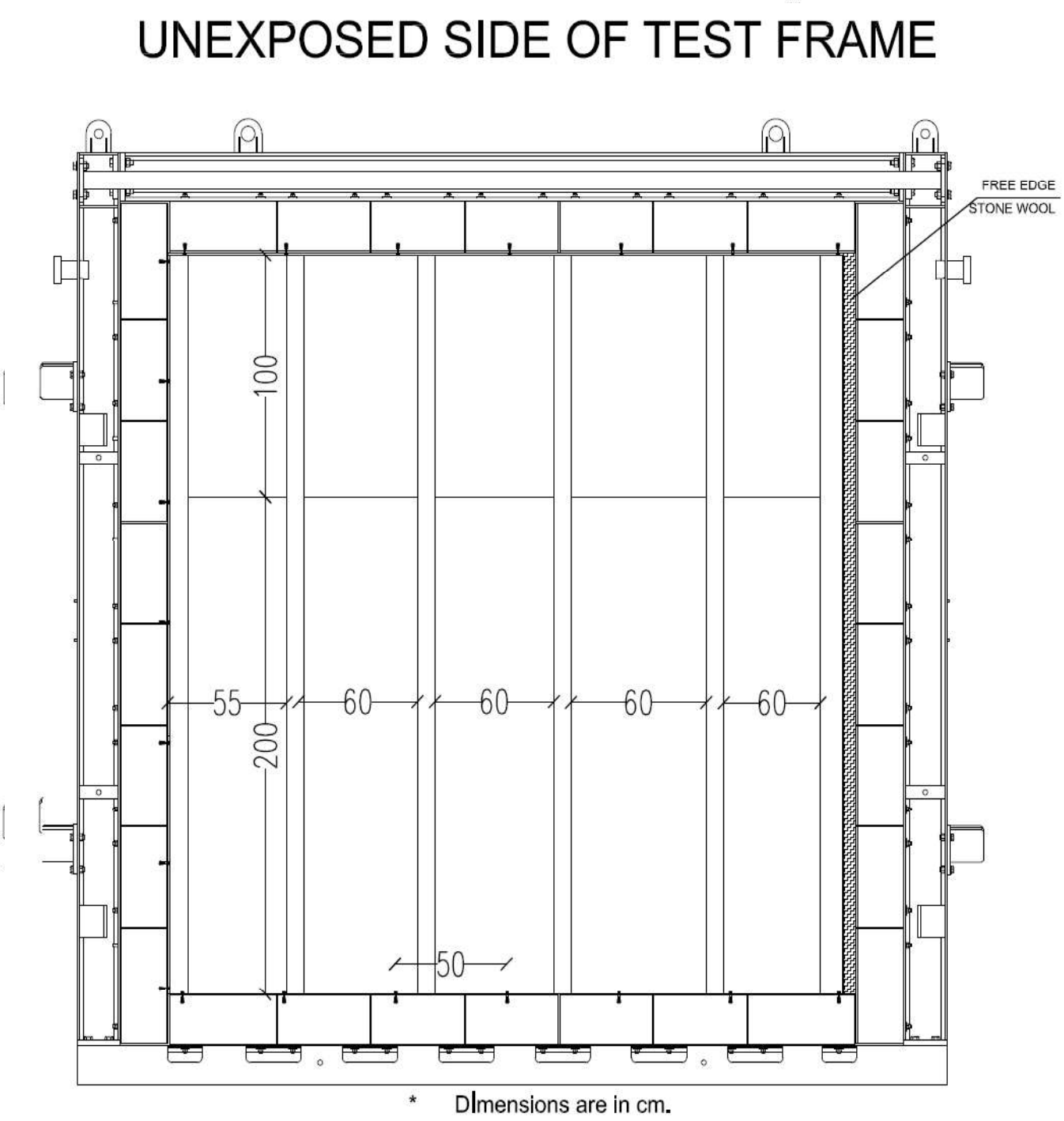
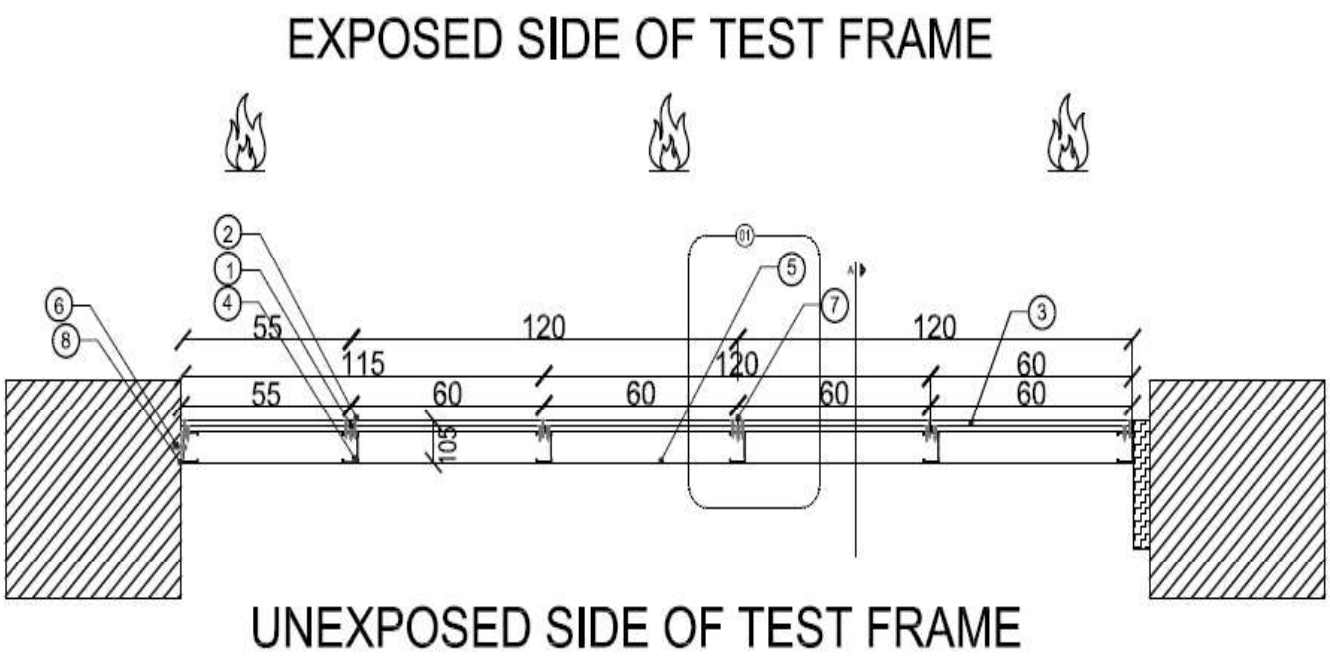


Figure 3: Unexposed side view of the test specimen.



① **Drywall screw 38:** In size 3,5x38 mm, spaced 40 cm.

② **Drywall screw 45:** In size 3,5x45 mm, spaced 30 cm.

③ **A1 COREX:** 2x15 mm thick. All joints are staggered.

④ **DC75 Steel Stud:** In size 47 x 74 x 47 and 0,6 mm thick, Z100 galvanized steel. 1 cm shorter then wall height and spaced 60 cm.

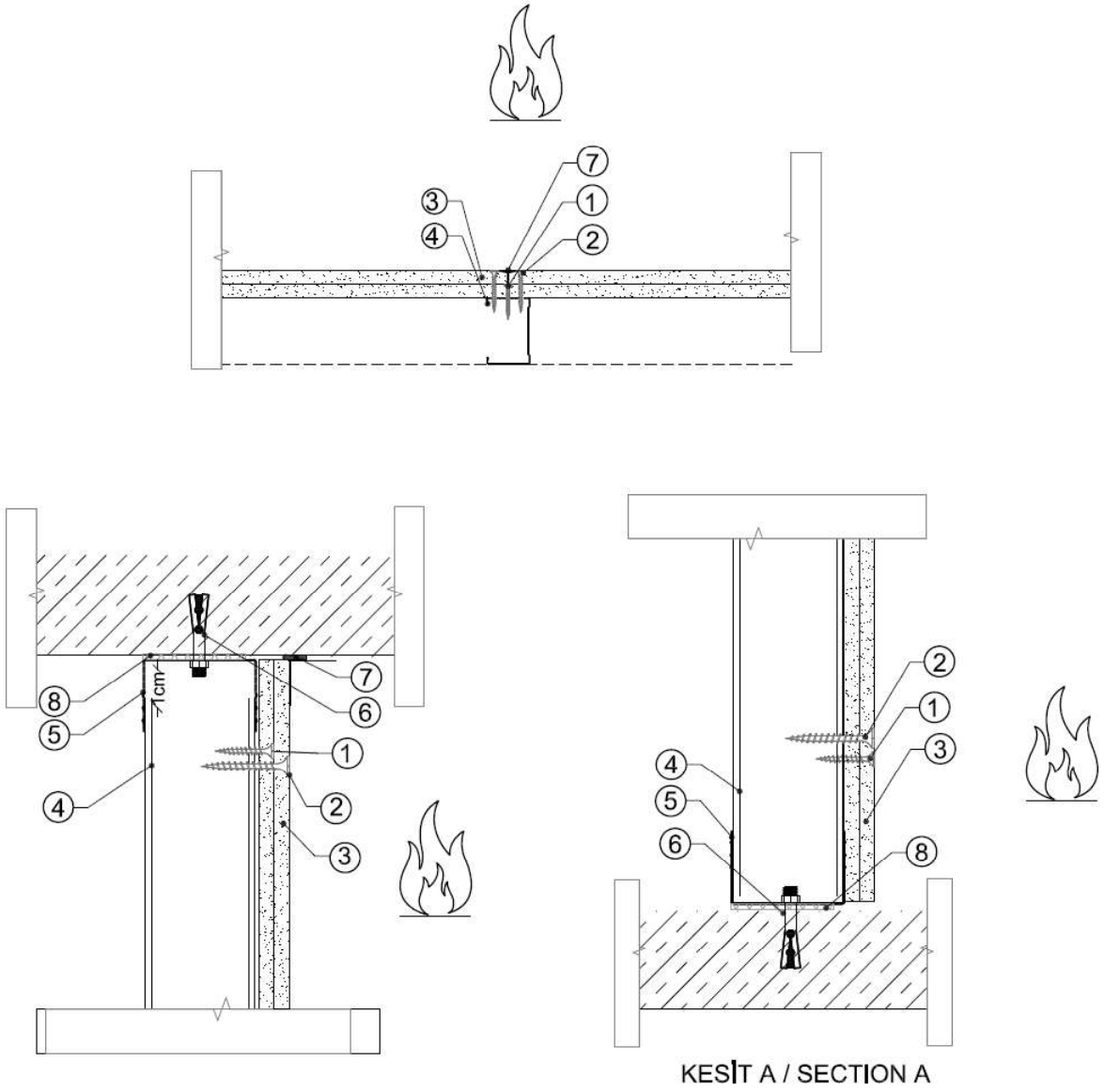
⑤ **DU75 Steel Track:** In size 38 x 75 x 38 mm and 0,5 mm thick, Z100 galvanized steel. No screws penetrated track to studs.

⑥ **Steel-dowel(M6 Dübel 6x45 mm) :** Fixed on exist floor spaced o.c. 50 cm. First fixing must be 5 cm for from edge of track.

⑦ **Jointing:** Nominal 5 cm wide fiber glass joint tapes applied on joints at stud. Gypsum board joints and screw head finished with DERZTEK jointing compound.

⑧ **Sound resilient tape 75 :** 3 mm thick polyehtlene foam resilient tape bended to bottom of tracks and studs which are touch to exist floor and columns.

Figure 4: Assembly details of the test specimen.



① **Drywall screw 38:** In size 3,5x38 mm, spaced 40 cm.

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⑥ **Steel-dowel(M6 Dübel 6x45 mm) :** Fixed on exist floor spaced o.c. 50 cm. First fixing must be 5 cm for from edge of track.

⑦ **Jointing:** Nominal 5 cm wide fiber glass joint tapes applied on joints at stud. Gypsum board joints and screw head finished with DERZTEK jointing compound.

⑧ **Sound resilient tape 75 :** 3 mm thick polyehtlene foam resilient tape bended to bottom of tracks and studs which are touch to exist floor and columns.

Figure 5: Sectional view of the test specimen and assembly details.

EFECTIS ERA AVRASYA

TEST VE BELGELENDİRME A.Ş.

Fire Test Laboratory

Test
TS EN ISO/IEC 17025
AB-0556-T

AB-0556-T
EEA-21-129-Rev1
10-22

CLASSIFICATION OF FIRE RESISTANCE PERFORMANCE

IN ACCORDANCE WITH EN 13501-2:2016

Sponsor : DALSAN ALÇI SAN. VE TİC. A.Ş.
Kızılcaşar Mahallesi, 1184. Cadde, No:22/1 İncek, Gölbaşı, Ankara/TURKEY

Prepared by : EFECTIS ERA AVRASYA Test ve Belgelendirme A.Ş.
Dilovası OSB 5. Kısım Fırat Cad. No: 18, 41455 Dilovası, Kocaeli/TURKEY

Product name : Shaft Wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework

Classification report no. : EEA – 21 – 129 – Rev1

Issue number : 1/2

Date of issue :11.10.2022

Remark : This report supersedes the previous report No. EEA-21-129 due to its validity date removed.

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1. INTRODUCTION

This classification report defines the classification in accordance with the procedures given in EN 13501-2:2016, assigned to shaft wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework.

2. DETAILS OF CLASSIFIED PRODUCT

2.1. Description

Shaft wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework is fully described below.

2.2. General

Product identification : Shaft wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework.

Direction of the fire : Plasterboards on the unexposed face of the framework

Manufacturer : DALSAN ALÇI SAN. VE TİC. A.Ş.
Gebze Güzeller OSB İnönü Mah. Ziya Gökalp Cad. No: 4, 41400 Gebze, Kocaeli/TURKEY

Sponsor of test : DALSAN ALÇI SAN. VE TİC. A.Ş.
Kızılcaşar Mahallesi, 1184. Cadde, No:22/1 İncek, Gölbaşı, Ankara/TURKEY

2.3. Construction

Partition wall system consisted of plasterboards mounted on the steel framework. Double layer of "A1 COREX 15 mm" plasterboards were placed on one face of the framework. Total thickness of the partition is 105 mm.

One vertical edge was mounted as in practise and the other vertical edge was constructed as a free edge to simulate a wider wall construction in practise.

2.4. Components

2.4.1. Framework

- *Edge and intermediate studs:*
  - *Type : DC 75 profile galvanized steel EN 14195*
  - *Dimensions : 2990 x 74 x 47/47 x 0,6 mm (h x d x w x t)*
  - *Fixing:*
    - *Type : Steel screws and steel dowels*
    - *Location: 7 pieces. used on the fixed edge. Screws were fixed to the frame c.t.c 500 mm distances.*
    - *Dimensions*: M6 (dowel) / 6 x 45 mm (*Ø x l)*
- *The studs had 10 mm gap at top to let the profiles expand freely. From fixed edge the distances between the studs respectively; 550 mm, 600 mm, 600 mm, 600 mm and 600 mm.*
- *Top and bottom profile:*
  - *Type : DU 75 profile, galvanized steel EN 14195*
  - *Dimensions : 38/38 x 75 x 3000 x 0,5 mm (h x d x w x t)*
  - *Fixing:*

- *Type : Steel screws and steel dowels*
- *Location: 7 pieces screws used each top and bottom profiles. The distance c.t.c between screws 500 mm and fixed profiles to top and bottom frame.*
- *Dimensions: M6 (dowel) / 6 x 45 mm (Ø x l)*

- *Insulation:*
  - *Type : Polyethylene foam resilient tape – DALSAN*
  - *Thickness : 3 mm.*
  - *Density : 30 kg/m³*
  - *Locations: Between DU and DC profiles and the supporting construction applied in profiles width.*

2.4.2. Plasterboards

- *Type : EN 15283-1, Type GM FH1RPlasterboard – A1 COREX 15 mm; Manufacturer: DALSAN*
- *Nominal density : 900 ± 135 kg/m³*
- *Measured density : 881 kg/m³*
- *Nominal thickness : 15 mm*
- *Fire classification : A1*
- *Coating : Both faces of the plasterboards were covered with fiberglass mattress; unit area weight of fiberglass mattress on one face of the plasterboard 205 g/m².*

- *Nominal dimensions : 2000 x 1200 x 15 mm (h x w x t)*
  - *Locations of plasterboards:*
    - *First layer (1st layer) :*
      - *Vertical: Location of plasterboards from bottom respectively; 1000 mm and 2000 mm.*
      - *Horizontal: Location of plasterboards from free edge respectively; 1200 mm, 1200 mm and 550 mm.*
    - *Second layer(2nd layer) :*
      - *Vertical: Location of plasterboards from bottom respectively; 2000 mm and 1000 mm.*
      - *Horizontal: Location of plasterboards from free edge respectively; 600 mm, 1200 mm and 1150 mm.*

- *Fixing:*
  - *Type: Steel drywall screw*
    - *Dimensions : 3,5 x 38 mm (Ø x l) – For first layer – DALSAN*
      3,5 x 45 mm (Ø x l) – For second layer – DALSAN
    - *Location : Drywall screws were used for fixing plasterboards to DC and DU profiles. C.t.c distance of first layer 400 mm and C.t.c distance of second layer 300 mm.*
- *Filler:*

– *Tip : Jointing compound – DERZTEK – EN 13963; Type: 3B Joint plater for filling and finish; Manufacturer: DALSAN*

– *Dry unit volume weight: 750 kg/m³*

– *Reinforcement : Self-adhesive fiberglass joint tape – Joint tape; Manufacturer: DALSAN; Fiberglass joint tape unit area weight: 65 g/m².*

– *Location : Used on joints of plasterboards and screwing points for both faces.*

*For detailed information see **Figure 1-5**.*

3. REPORTS AND RESULTS IN SUPPORT OF CLASSIFICATION

3.1. Reports

Name of laboratory	Name of sponsor	Test Report Reference No.	Test Method
EFECTIS ERA AVRASYA TEST VE BELGELENDİRME A.Ş.	DALSAN ALÇI SAN. VE TİC. A.Ş.	RFTR21189	EN 1364-1:2015

3.2. Results

Test method	Parameter	Results
EN 1364-1:2015	Integrity, [**E**] – Cotton pad – Gap gauges ∅ 6 mm ∅ 25 mm – Flames longer than 10 sec.	 no failure (not applied) no failure (not applied) no failure (not applied) not observed
	Insulation, [**I**] – Average temperature – Maximum temperature	 no failure 65th minutes
Test was terminated at 66th minutes after consulted with sponsor of the test.		

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 13501-2:2016.

4.2. Classification

Shaft wall system consisting of double layer of "**A1 COREX 15 mm**" plasterboards mounted on one face of the framework 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

FIRE RESISTANCE CLASSIFICATION*
E 60, EI 60

***** *Valid for the direction of the wall given in the clause 2.2.*

4.3. Field of Application

4.3.1 General

This report details the method of construction, the test conditions and the results obtained when the specific elements of construction described herein was tested following the procedure outlined in EN 1363-1:2020, and when appropriate EN 1363-2:1999. Any significant deviation with respect to size, constructional details, load stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.

4.3.2 Specific conditions for dimensions and fixing

Test results 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.

- 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
- It is not allowed to increase the number of horizontal joints of the type tested
- Increase in the number of vertical joints, of the type tested

4.3.3 Extension of height

The height of the construction may be increased to 4 meters for a fire resistance **60 minutes** for the criteria integrity and thermal insulation, because the lateral deflection of the construction is less than 100 mm.

4.3.4 Extension of width

The width of an identical construction can be increased, because the construction is tested with a width of 3 meters with one vertical free edge.

5. LIMITATIONS

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

Prepared by:

e-signed

.....

Yusuf ÜSTÜNDAĞ

Person in the charge of the test

Approved by:

e-signed

.....

Ali BAYRAKTAR

Laboratory Manager

6. DRAWINGS:

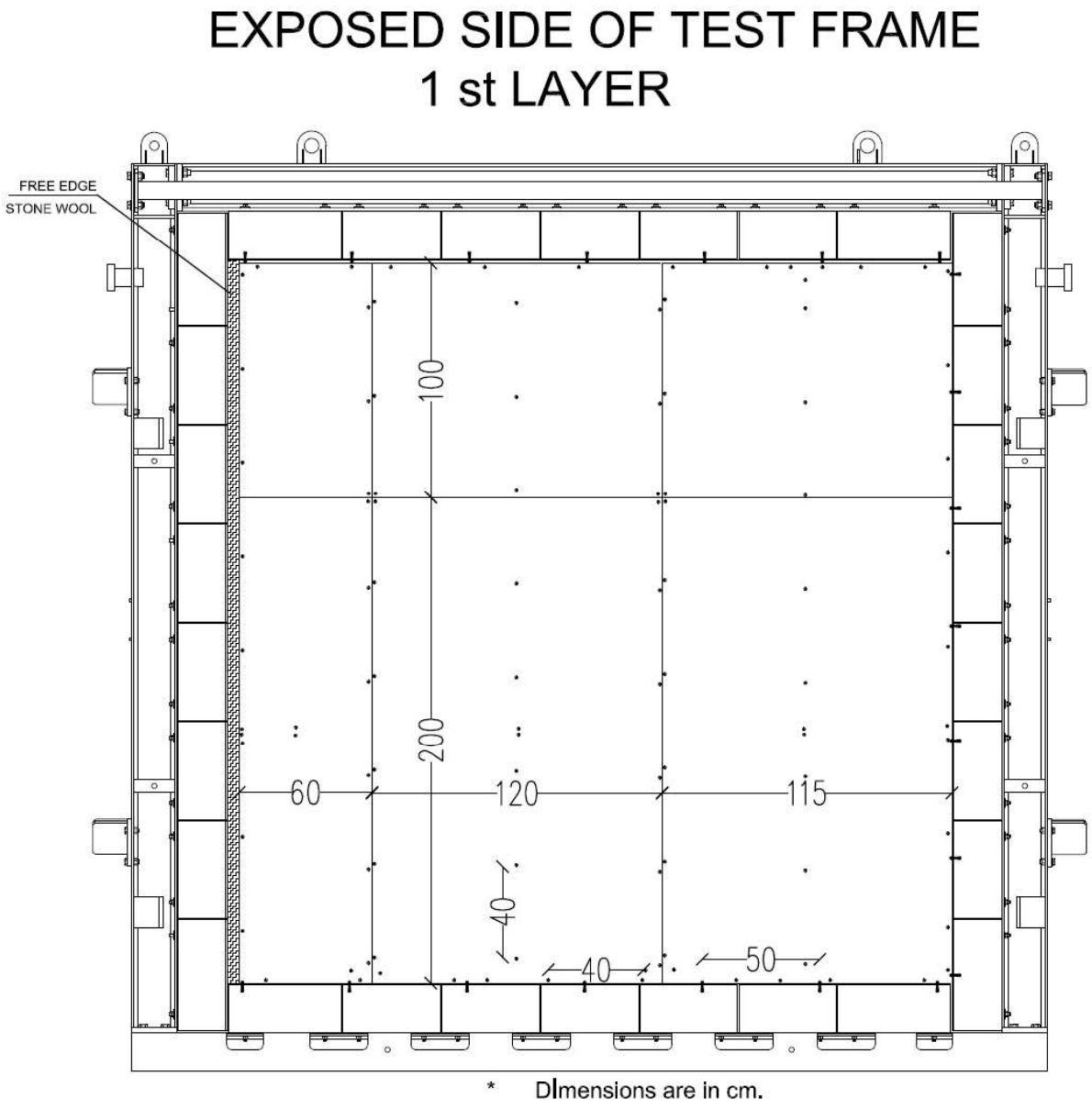


Figure 1: First layer view of unexposed side of the test specimen.

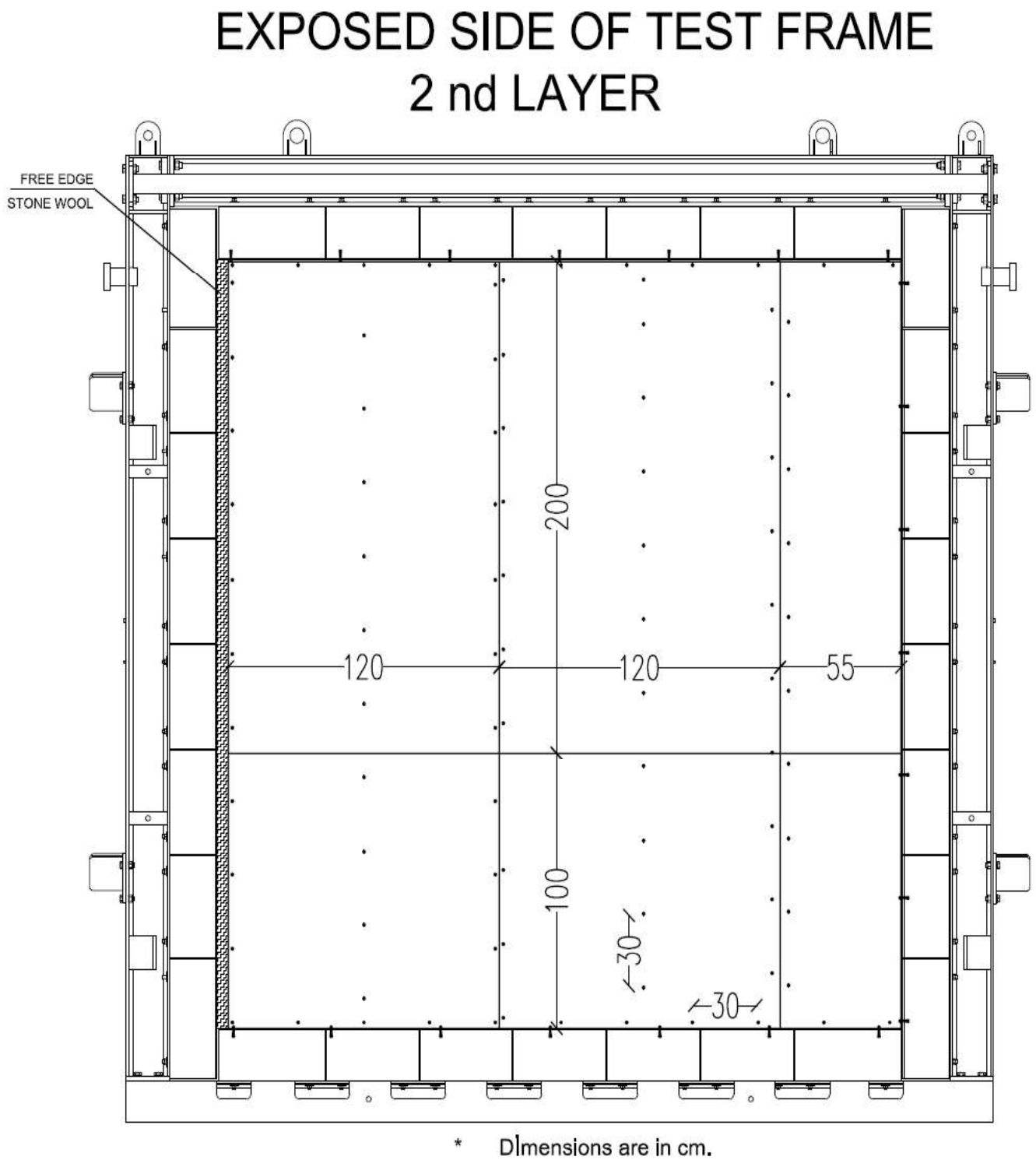


Figure 2: Second layer view of unexposed side of the test specimen.

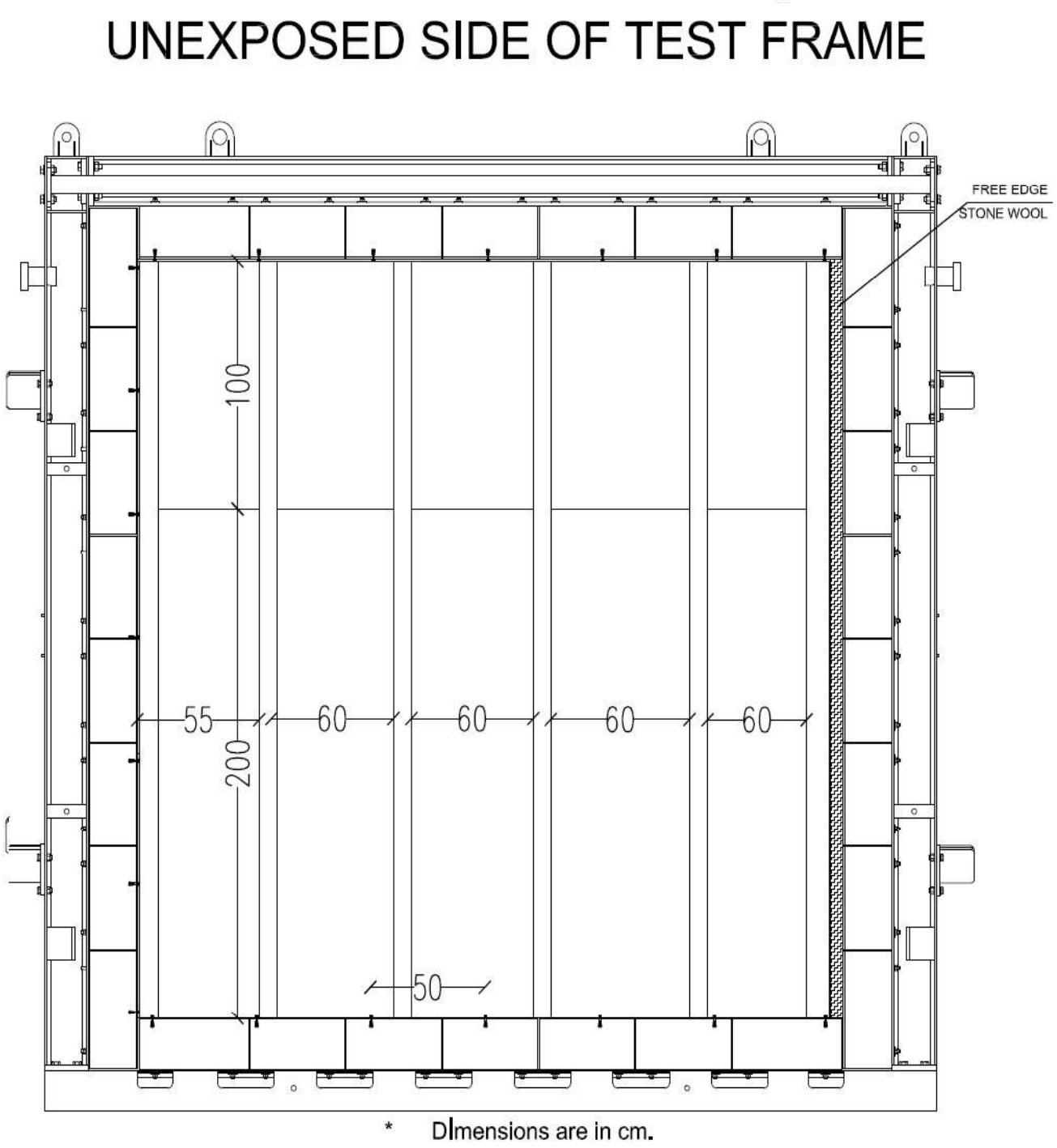
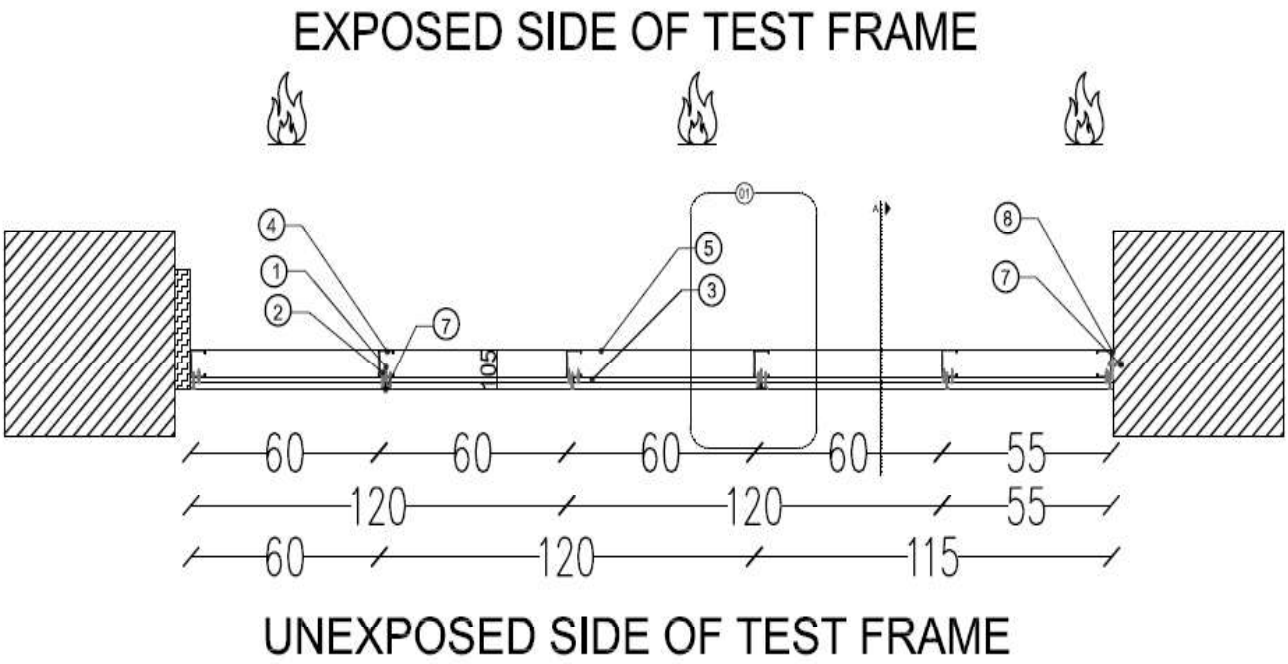


Figure 3: Unexposed side view of the test specimen.



① **Drywall screw 38:** In size 3,5x38 mm, spaced 40 cm.

② **Drywall screw 45:** In size 3,5x45 mm, spaced 30 cm.

③ **A1 COREX:** 2x15 mm thick. All joints are staggered.

④ **DC75 Steel Stud:** In size 47 x 74 x 47 and 0,6 mm thick, Z100 galvanized steel. 1 cm shorter then wall height and spaced 60 cm.

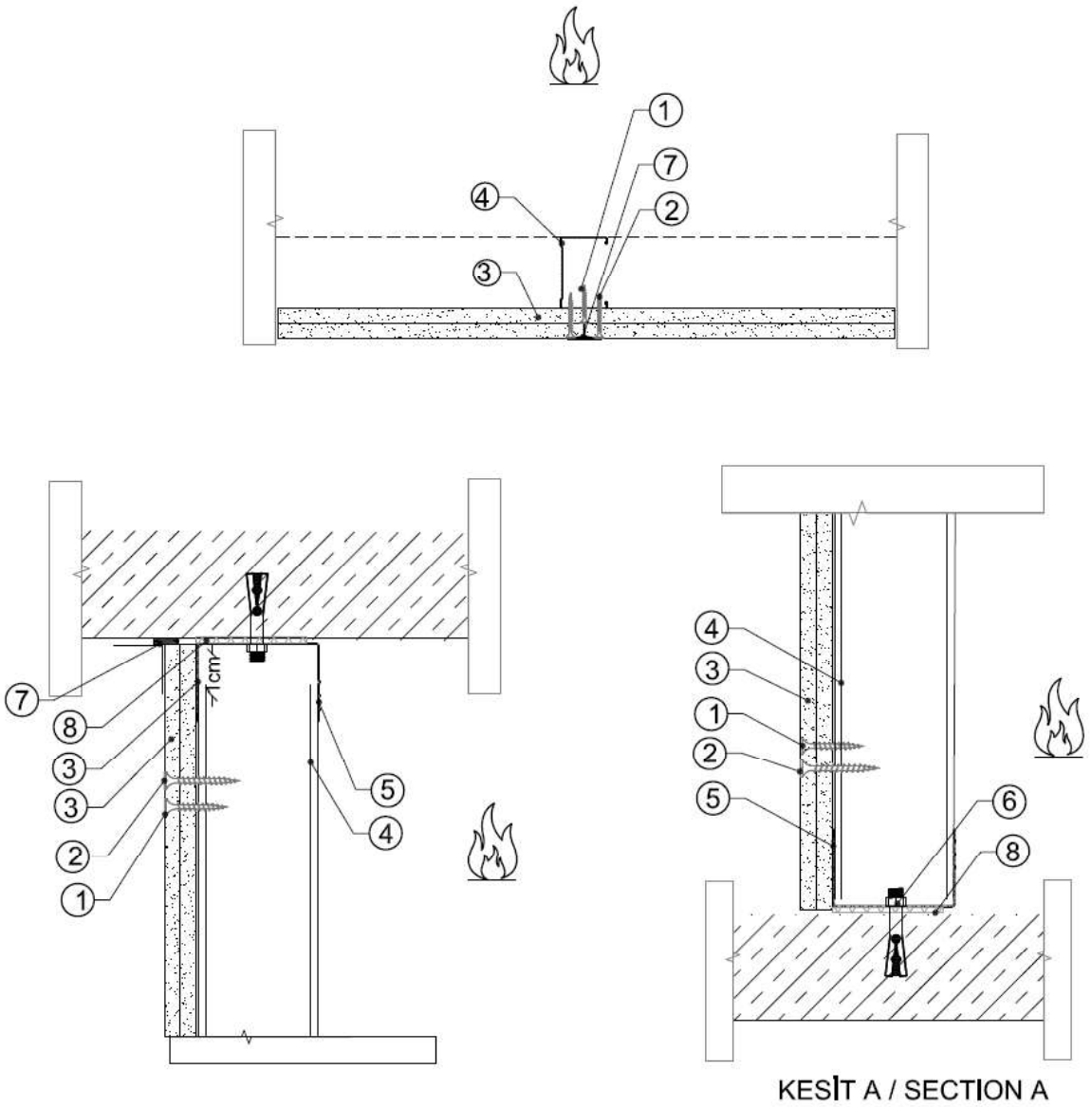
⑤ **DU75 Steel Track:** In size 38 x 75 x 38 mm and 0,5 mm thick, Z100 galvanized steel. No screws penetrated track to studs.

⑥ **Steel-dowel(M6 Dübel 6x45 mm) :** Fixed on exist floor spaced o.c. 50 cm. First fixing must be 5 cm for from edge of track.

⑦ **Jointing:** Nominal 5 cm wide fiber glass joint tapes applied on joints at stud. Gypsum board joints and screw head finished with DERZTEK jointing compound.

⑧ **Sound resilient tape 75 :** 3 mm thick polyehtlene foam resilient tape bended to bottom of tracks and studs which are touch to exist floor and columns.

Figure 4: Assembly details of the test specimen.



① **Drywall screw 38:** In size 3,5x8 mm, spaced 40 cm.

② **Drywall screw 45:** In size 3,5x45 mm, spaced 30 cm.

③ **A1 COREX:** 2x15 mm thick. All joints are staggered.

④ **DC75 Steel Stud:** In size 47 x 74 x 47 and 0,6 mm thick, Z100 galvanized steel. 1 cm shorter then wall height and spaced 60 cm.

⑤ **DU75 Steel Track:** In size 38 x 75 x 38 mm and 0,5 mm thick, Z100 galvanized steel. No screws penetrated track to studs.

⑥ **Steel-dowel(M6 Dübel 6x45 mm) :** Fixed on exist floor spaced o.c. 50 cm. First fixing must be 5 cm for from edge of track.

⑦ **Jointing:** Nominal 5 cm wide fiber glass joint tapes applied on joints at stud. Gypsum board joints and screw head finished with DERZTEK jointing compound.

⑧ **Sound resilient tape 75 :** 3 mm thick polyehtlene foam resilient tape bended to bottom of tracks and studs which are touch to exist floor and columns.

Figure 5: Sectional view of the test specimen and assembly details.