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CLASSIFICATION OF FIRE RESISTANCE

**The object of
classification:***Non-loadbearing walls in accordance with
EN 13501-2:2017, 7.5.2***Identification number:****PK2-05-14-904-A-1****Product name and type:****Non-loadbearing wall
A glass brick wall****Sponsor:****VITRABLOK, s.r.o.**
Bílinská 42
419 14 Duchcov
Czech Republic**Issuing organization:****PAVUS, a.s.**
Authorised Body AO 216
Notified Body 1391
Accredited certification body for products No. 3041
- Accreditation issued by Czech Accreditation Institute, Public Service
Company
- Certificate of Accreditation No. 170/2019Prosecká 412/74
190 00 PRAGUE 9

Order No. Z220190285

Date of issue:

2019-09-25

Copies in total:

2

Issue number:

1

Pages in total:

4



1 INTRODUCTION

- 1.1 This Classification Report specifies the classification of given element in conformity with the proceedings given in ČSN EN 13501-2.
- 1.2 This classification report replaces and cancels classification report No. PK2-05-14-904-A-0 issued by PAVUS, a.s., dated 2014-08-18.
- 1.3 This classification report consists of 4 pages and may only be used or reproduced in its entirety.

2 DETAILS OF CLASSIFIED ELEMENT

2.1 Generally

The subject of classification report is *Non-loadbearing wall – prefab glass brick wall* which is defined as fire resistance structure and it has function of fire resistance partition construction with respect to fire characteristics of properties stated in clause 5 of ČSN EN 13501-2:2017.

2.2 Description

The glass brick wall consists of 196 glass brick, placed in fourteen rows of fourteen bricks each. Glass brick WECK SHS – with a hollow inner space of 50 mm thick, exterior dimensions: 190 x 190 mm, thickness: 100 mm (new marking 1919/10 30F). There is a 10 mm joint between the glass brick; this joint is filled with mortar (BEAMIX VERHAERT 932, volumetric weight: 2 072 kg/m³). The edge of the glass brick wall is also made of mortar and has a width of 90 mm and a thickness of 100 mm. Two reinforcement bars (smooth steel, Ø 8 mm) are placed in each horizontal and vertical joint between the glass bricks. Two reinforcement bars (smooth steel, Ø 8 mm) are placed in the wall edges, both horizontally and vertically. The dimensions of a prefab glass brick wall: 2 980 x 2 980 x 100 mm (height x width x thickness).

The glass brick wall is supported by two plastic adjusting blocks (PVC, dimensions: 75 x 45 x 10 mm). At the top and at the two vertical sides, the glass brick wall is attached to the frame in four places. This is done by means of a steel fixing plate (galvanized steel, thickness: 3 mm, dimensions: 40 x 270 mm) which is attached to the glass brick wall by means of bolts (M10, length 20 mm) placed in a fixing sleeve (VEMO, interior diameter: M10) in the wall.

The fixing sleeve is anchored into the wall by means of a steel wire (Ø 3.5 mm, length: 130 mm). The fixing plate is attached to the supporting construction by means of a screw (Ø 4.5 mm, length: 80 mm, with matching steel pinion and PVC plug). The gaps between the glass brick and the supporting construction are filled with insulation foam (Soudal Soudafoam FR) and finished off with a silicone paste (PROMAT FIRECRYL FR).

Name and address of the manufacturer of the glass bricks: VITRABLOK, a.s., Bílinská 42, 419 14 Duchcov, Czech Republic.

Name and address of the manufacturer of the test specimen – glass brick wall: Verheart & Co, Ter Stratenweg 35, KMO-zone Ter Straten, B-2520 OELEGEM (RANST), Belgium.

Description and drawings of the product is mentioned in Test report No. 11861A, issued WFRGENT NV, dated 2006-02-22.

3 TEST REPORTS / REPORTS OF EXTENDED APPLICATION AND TEST RESULTS SUPPORT FOR THIS CLASSIFICATION

3.1. Test reports / Extended application reports

Name of the Laboratory Address Accreditation N°	Sponsor of the Report	Report number Date of issue	Test method
WFRGENT NV OttergemsesteenwegZuid 711 B-9000 Ghent, Belgium BELTEST 256-T	VITRABLOK a.s. Bílinská 42 419 14 Duchcov	11861A 2005-11-02 2006-02-22	EN 1364-1

3.2. Stress conditions and test results

Test method Test report number Date of issue	Parameter	
EN 1364-1 11861A 2006-02-22	Thermal exposure Direction of loading Number of exposed sides Dimension of test specimen Dimension of glass brick Supporting structure	<i>standard curve time / temperature symmetrical structure 1 2 980 mm (width) x 2 980 mm (height) x 100 mm (thickness) 190 x 190 mm high density rigid construction from concrete, anchored around the perimeter</i>
	Integrity (E) - the ignition of a cotton pad - cracks or holes exceeding given limits - unstained flaming on unexposed surface	<i>73 minutes 120 minutes, no failure 120 minutes, no failure</i>
	Insulation (I) - average temperature rise (140 °C) - maximum temperature rise (180 °C)	<i>31 minutes 31 minutes</i>
	Radiation (W) - heat flux 15 kW.m ⁻²	<i>71 minutes</i>

4 CLASSIFICATION AND FIELD OF APPLICATION

4.1 Reference

This classification has been carried out in accordance with clause 7 of ČSN EN 13501-2. The fire test was evaluated according to ČSN EN 1364-1: 2017; the test procedure and test conditions have met the requirements of EN 1364-1: 1999.

4.2 Classification

Non-loadbearing wall – prefab glass brick wall is classified in accordance with the following combinations of attribute parameters and fire resistance classes:

E60 / EI 30 / EW 60

4.3 The field of application

Of *prefab glass brick wall* are directly applicable on similar structures in accordance with ČSN EN 13501-2 (2017) and ČSN EN 1364-1 (2017) in which one or more changes listed below are made and designed constructions with their stiffness and stability comply with the appropriate design code:

- increase the height is not allowed;
- the width of identical construction cannot be increased.

The result is applicable to high density rigid supporting constructions with at least the same fire resistance as the test specimen.

5 LIMITATIONS

This classification is valid unless the conditions under which it was issued have been changed. The sponsor may request the issuing authority to review the influence of changes to the classification validity.

The duration of the validity of this classification report is 5 years of the issue date.

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

Prepared by:

Reviewed by:

Approved by:



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