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Title:

Classification report of a vertical division in accordance with Standard EN 13501-2:2007+A1:2009 "(equivalent to UNE-EN 13501-2:2009+A1:2010).



No. 9/LE 895

Tested material:

Fire resistant air transfer grills, reference "GE120" and "GE120-XL".

File number: 16/12283-1011-1 M1

This report cancels and replaces the original report 16/12283-1011-1 issued on 15th July of 2016. It is responsibility of test sponsor the replacement of the original and all copies.

Description of the modification: correction of clause 5 of the current report.

Petitioner:

RF Technologies nv/S.A.
Lange Ambachstraat 40
B-9860 Oosterzele
Belgium

Report date:

29th August, 2016

Test date:

23rd May, 2016

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This document consists of 6 pages.

1.- INTRODUCTION

This Fire Resistance Classification Report defines the classification assigned to fire resistant air transfer grills reference "GE120" and "GE120-XL" in accordance with the procedures given in EN 13501-2:2007+A1:2009 "Fire classification of construction products and building elements. Part 2: Classification using data from fire resistance tests, excluding ventilation services".

2.- PARTICULARS OF THE CLASSIFIED ELEMENT

2.1.- Type of function

The elements "GE120" and "GE120-XL" are defined as fire resistant air transfer grills. Its purpose is to resist the spread of fire and hot gases, based upon the integrity and thermal insulation characteristics provided in section 5 of standard EN 13501-2:2007+A1:2009.

2.2.- Description

The fire resistant air transfer grills consist of a MDF frame and horizontal slats.

The outside dimensions (width nominal x height nominal) of the air transfer grills are the following:

- 1200 x 800 mm (GE120-XL)
- 800 x 400 mm (GE120)

The Test Report contains a comprehensive description of the tested element, on which the classification defined in section 5 of this report is based.

3.- TEST REPORT

This Classification Report is based on the following Test Report:

File number: 16/12283-1011 Part 1

Issued on date: 15th July 2016

Test date: 23rd May 2016

4.- TEST RESULTS

4.1.- Test standard:

EN 1364-1:2015: "Fire resistance tests for non-loadbearing elements. Part 1: Walls."

4.2.- EXPOSURE CONDITIONS

| | |
|----------------------------------|--|
| Temperature-time curve | $(T = 345 \log (8t+1) + 20)^{1.1}$ |
| Direction of the exposure | Indifferent (symmetrical construction) ² |
| Number of sides exposed | 1 |
| Load applied | None |
| Supporting conditions | Samples installed in a wall made of 100 mm-thick aerated concrete brick wall |

¹According to clause 2.4.2.1 of ETAG 026-4:2008 "In the case of a non-loadbearing element (wall, ceiling, partition, ect.) the test shall be in accordance with EN 1364-1".

²ETAG 026-4 clause 2.4.2.1 states "the grill shall be tested with exposure to fire to each face, unless the grill is symmetrical in construction".

4.3.- TABLE OF RESULTS

GRILL A

Dimensions: 1200 x 800 mm (width nominal x height nominal)

Wall type: aerated concrete wall of 100 mm thick

Material used in joint: Ytocol of 10 mm thick

| | Failure minute | Reason |
|---------------------------|-----------------------|--|
| Integrity | Minute 173 | A sustained flame appears at mid-width of its upper edge |
| Thermal Insulation | Minute 173 | Integrity failure and also roving thermocouple increases more than 180 °C its initial temperature. |

GRILL B

Dimensions: 800 x 400 mm (width nominal x height nominal)

Wall type: aerated concrete wall of 100 mm thick

Material used in joint: gypsum of 20 mm thick

| | Failure minute | Reason |
|---------------------------|-----------------------|--|
| Integrity | Minute 173 | A sustained flame appears at mid-height of its left edge |
| Thermal Insulation | Minute 173 | Integrity failure. |

GRILL C

Dimensions: 1200 x 800 mm (width nominal x height nominal)

Wall type: aerated concrete wall of 100 mm thick

Material used in joint: gypsum of 20 mm thick

| | Failure minute | Reason |
|---------------------------|-------------------------|---------------|
| Integrity | Maintained, 180 minutes | - |
| Thermal Insulation | Maintained, 180 minutes | - |

GRILL D

Dimensions: 800 x 400 mm (width nominal x height nominal)
 Wall type: aerated concrete wall of 100 mm thick
 Material used in joint: Ytocol of 10 mm thick

| | Failure minute | Reason |
|---------------------------|-------------------------|---------------|
| Integrity | Maintained, 180 minutes | - |
| Thermal Insulation | Maintained, 180 minutes | - |

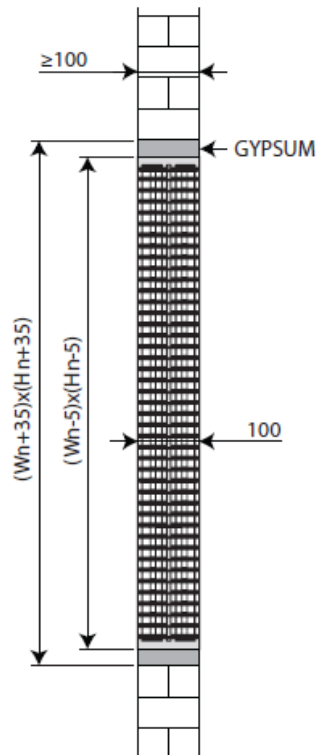
5.- CLASSIFICATION

Pursuant to subsection 7.5 of standard EN 13501-2:2007+A1:2009, the classification of the tested element is as follows:

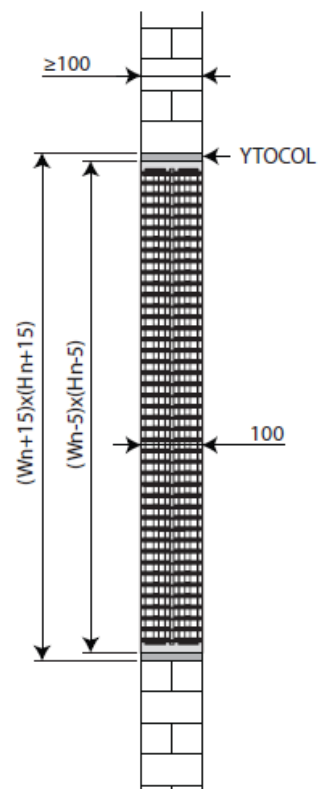
| Grill | Reference | Dimension (W_nxH_n) | Average Pressure at mid height | Joint | Supporting construction | Orientation | EI |
|--------------|------------------|--|---------------------------------------|----------------|-----------------------------------|--------------------|--------------------------|
| Grill A | "GE120-XL" | 1200x800 | + 4,25 Pa | Ytocol – 10 mm | Aerated concrete wall – 100 width | V _e | EI 120 EW 120 |
| Grill B | "GE120" | 800x400 | + 5,95 Pa | Gypsum – 20 mm | Aerated concrete wall – 100 width | V _e | EI 120 EW 120 |
| Grill C | "GE120-XL" | 1200x800 | - 5,95 Pa | Gypsum 20 mm | Aerated concrete wall – 100 width | V _e | EI 180 EW 120 |
| Grill D | "GE120" | 800x400 | - 4,25 Pa | Ytocol – 10 mm | Aerated concrete wall – 100 width | V _e | EI 180 EW 120 |

NOTE: The air transfer frills are tested at underpressure and overpressure. ETAG026-4:2008 clause 2.4.2.1 "if the product is to be used in both high and low pressure applications, test must be carried at high and low level in the furnace"

6.-INSTALLATION DRAWINGS (see DETAILS 1 and 2)



Detail 1: Grills B and C



Detail 2: Grills A and D

7.- DIRECT APPLICATION FIELD

7.1 Generalities:

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 (according to 13-UNE-EN 1364-1: 2000 standard).

- a) decrease in height;
- b) increase in the thickness of the wall;
- c) increase in the thickness of component materials;
- d) decrease in linear dimensions of boards or panels but not thickness;
- e) decrease in stud spacing;
- f) decrease in distance of fixing centres;

7.2 Supporting constructions

The following rules for the field of application apply.

7.2.1 Standard supporting constructions

For specimens tested with any standard supporting construction as defined in EN 1363-1, the result is applicable to any other supporting construction of the same type (flexible or rigid) that has the same or a greater classified fire resistance (thicker, denser, more layers of boards, as appropriate) than the one used in the test and the same horizontal and/or vertical orientation, i.e.:

- both (vertical and horizontal) if the specimen was tested with the standard supporting construction fixed along both the horizontal and the vertical edge.

The validity period is stated in the product's certification system.

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

Manager of the Fire Laboratory
LGA Technological Center, S.A.

Manager of Fire Resistance
LGA Technological Center, S.A.

The results refer exclusively to the samples tested at the time and under the conditions indicated herein.

Service Quality Guarantee

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In the framework of our Improvement Programme, we welcome any comment you may have; please direct them to the person signing this document or to the Quality Director of Applus, A. Fernández, to the address: satisfaccion.cliente@appluscorp.com.