



# Classification Report

## Non-loadbearing wall

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**Name of sponsor:** STB Byg A/S  
**Product name:** Non-loadbearing wall  
**File no.:** PCA10426A  
**Date:** 31-01-2017  
**Pages:** 7  
**Ref:** NOL / ADR



**DBI**

# Client information

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Denmark

The results relate only to the items tested. The classification report should only be reproduced in extenso - in extracts only with a written agreement with this institute.



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# 1 Introduction

This classification report defines the classification assigned to the product in accordance with the procedures given in DS/EN 13501-2:2016.

This classification report includes the direct field of application of the test results.

# 2 Details of classified product

## General

Producer of product: STB Byg A/S

The product was designated: EI30 – Glazed partition

The classification is valid for the following end use application: Non-loadbearing wall

## Product description

The product is a glazed partition consisting of a wooden frame. The glass panes are divided by mullions and transoms. The glass panes are fastened by steel angles.

The details of the product are described in DBI test report PGA10951A dated 31-01-2017.

# 3 Reports in support of the classification

## Test report

The product was successfully tested in accordance with EN 1364-1:2015. The evidence for this is given in the test report listed below:

Reference tests:				
Name of Laboratory	Name of sponsor	Test report file no.	Test method	Test date
Danish Institute of Fire and Security Technology	STB Byg A/S	PGA10951A dated 31-01-2017	EN 1364-1:2015	07-11-2016
Vetrotech Saint-Gobain International AG	STB Byg A/S	IFTS_C1602027_EI60_I-O_Results_27.06.2016	EN 1364-1:2015	27-06-2016
Vetrotech Saint-Gobain International AG	STB Byg A/S	IFTS_C1602028_EI60_O-I_Results_28.06.2016	EN 1364-1:2015	28-06-2016

## Test results

DBI test report PGA10951A concerns a glazed partition consisting of a wooden frame. The glass panes are divided by mullions and transoms. The glass panes are fastened by steel angles.

This test specimen was tested with the exterior side facing the furnace (outside exposure):



Test Duration	Parameter	Test results
41 minutes	<b>Integrity</b> - Time of ignition of cotton pad: - Time of occurrence of sustained flaming: - Time of failure of gap gauge criteria:	No failure No failure No failure
	<b>Insulation</b> - Failure of insulation due to failure of integrity: - Time of failure of measured average temperature rise: - Failure of maximum measured temperature rise:	No failure No failure No failure

Test IFTS\_C1602027\_EI60\_I-O\_Results\_27.06.2016 and test IFTS\_C1602028\_EI60\_O-I\_Results\_28.06.2016 concerns the EI60 version of the same glazed partition as tested in PGA10951A. The test specimen was tested from each side in the two tests:

In test IFTS\_C1602027\_EI60\_I-O\_Results\_27.06.2016 the wall was tested with the interior side facing the furnace (inside exposure), test was stopped after 90 minutes without any failures.

In test IFTS\_C1602028\_EI60\_O-I\_Results\_28.06.2016 the wall was tested with the exterior side facing the furnace (outside exposure), test failed after 77 minutes due to sustained flaming.

## 4 Exposure condition:

DBI have used the guideline in EN 13501-2:2016 section 7.1.2.2 to determine the weakest side. DBI has evaluated that only testing with fire on the exterior side (outside exposure) is sufficient because it can be assumed the weakest side. This is based on DBI's laboratory experience and the construction of the specific test specimen. The fire technical rationale behind is:

- On the interior side the rebate of the frame overlaps the glass by 20 mm and protects the gap between the glass and frame from through going fire. On the exterior side the glass is fully exposed to the fire and the gap between the glass and frame is exposed to the fire.
- The 16 mm fire glass is located on the interior side followed by 12 mm gap, 6 mm float glass, 12 mm gap and 6 mm float glass on the exterior side. With fire on the exterior side the two layers of float glass will break and fall down exposing the fire glass to the fire. The temperatures are measured on the fire glass and only the thickness of the fire glass will protect the frame member. When the construction is exposed to fire on the interior side the fire glass is exposed to fire first making it foam up and protect the underlying float glass. This will result in a longer test because the insulation is measured on the outer float glass and not on the fire glass and the frame member will be protected by the complete thickness of the glasses and gaps.

To support DBI's assumption, the sponsor supplied DBI with test data of the construction tested from both sides performed in Vetrotech Saint-Gobain International AG fire laboratory. These tests supported DBI's assumption that the exterior side was the weakest side.



## 5 Classification and field of application

### Reference

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This classification has been carried out in accordance with clause 7.5.2 of EN 13501-2:2016.

### Classification

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The product is classified according to the following combinations of performance and classes as appropriate.

**Fire resistance classification: E130**

The classification is valid for fire resistance from either side.

### Field of application

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The classification is valid for the following end use conditions:

Dimensions: (EN 1364-1:2015 § A.4.2.2.1; A.4.3.2.1; A4.2.1.3 and A.4.3.3)

The linear dimensions of panes may be decreased from the dimensions tested. Height and width may be considered independently.

**Height of the glazed element**

The height of the glazed element can be increased by a factor of 1.2 to a maximum of 3600 mm.

**Width of the glazed element**

The overall width of the glazed element can be increased by replication of the tested glazed element.

**Height of the individual glass pane**

The height of the individual glass pane can be increased by a factor of 1.2 to a maximum of 3504 mm, subjected to a maximum area of 4.929 m<sup>2</sup>.

**Width of the individual glass pane**

The width of the individual glass pane can be increased by a factor of 1.2 to a maximum of 1674 mm, subjected to a maximum area of 4.929 m<sup>2</sup>.

**Area of the individual glass pane**

The area of the individual glass pane can be increased by a factor of 1.21 to a maximum of 4.929 m<sup>2</sup>.

In order to accommodate the increase in glass dimension, it is permitted to increase the distance between mullions and/or transoms.

Installation angle: (EN 1364-1:2015 §A4.2.1.1)

The glazed element can be installed with an installation angle of maximum  $\pm 10^\circ$  from the vertical plan, provided the height of the glazed element is not larger than the maximum height tested.

Framing system: (EN 1364-1:2015 §A4.2.3)

The distance between mullions and/or transoms may be decreased.

The frame profiles were attached to the supporting construction c/c distance 400 mm, this distance can be decreased.

The cross-section dimension of the frame profiles may be increased from the tested 140 mm, since temperatures have been measured on the unexposed side of the frame profiles.

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Supporting construction: (EN 1364-1:2015 §A4.2.4.2)

The glazed element was tested in a low density rigid standard supporting construction. The glazed element can be installed in high density rigid supporting constructions with at least the same fire resistance classification (EI30) and overall thickness or greater than tested. (Minimum thickness 150 mm)

The test specimen was attached to the standard supporting construction vertical and horizontal (top and bottom).

## 6 Limitations

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

### Danish Institute of Fire and Security Technology

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