

REPORT

Contract no:	509/2017/05 - BB	03/03/2017 MAI/PIK
Customer:	KLH Massivholz GmbH Katsch an der Mur 202 8842 Teufenbach-Katsch	
Subject:	Renewal of the classification report (contract no. 2005/2008/2 and extension 126/2012) on the fire resistance of a load-carrying cross-laminated timber floor	
Date of contract:	13/02/2017 (letter)	
Date of sample delivery:	--	
Date/Period of service:	February 2017	
Period of validity:	March 2017 to March 2022	
Pages:	5	
Enclosures:	1 (1 page)	

1. Contract

By way of the letter dated 13/02/2017, the company KLH Massivholz GmbH, AT-8842 8842 Teufenbach-Katsch, charged Holzforschung Austria with the extension of the classification report (contract no. 2005/2008/2 and extension 126/2012) on the fire resistance according to ÖNORM EN 13501-2 of load-carrying components (floor). The structures were not altered as compared to the classified structures.

2. Details of the classified components

2.1. General information

The load-carrying cross-laminated timber floor is defined as type-classified component. Its function is to resist the fire with a view to load-carrying capacity, thermal insulation and room closure. Fasteners and gaps between fasteners according to approval or respective standard.

2.2. Floor structure

The structure of the cross-laminated timber floor consists of five layers, with the height of the three longitudinal layers being 34 mm and the one of the two transverse layers being 22 mm. The test specimen is comprised of two elements which are connected by means of a rebate and a screwed connection at the edges (M6 x 140 mm) at a distance of 200 mm. The dimensions of the elements are:

Length 5000 mm and width 1750 mm

Length 5000 mm and width 1250 mm

The transverse edges of the individual board and the transverse layers were glued together with Purbond HB 360. According to the in-house assessment of the company KLH, the glue application quantity is 160 g/m².

3. Test and test result on which the classification is based

3.1. Test report on the load-carrying multi-layer wooden floor

The test report on which this classification report is based was prepared by the test centre MA 39 accredited for that purpose, Magistrate of the City of Vienna, magistrate department 39 - VFA laboratory for structural engineering, test, monitoring and certification centre of the City of Vienna, with report number MA 39 – VFA 2009-0078.01 "Test report on the fire resistance of a load-carrying multi-layer wooden floor (test of 24/11/2008)" according to ÖNORM EN 1365-2, report date 26/01/2009.

3.1.1. Set-up:

Fire zone

Cross-laminated timber element KLH 146 mm/ 5 s (34 22 34 22 34)

Cross-laminated timber floor consisting of 2 elements

Overall dimensions: 5000 mm x 3000 mm x 146 mm (w x h x h)

Side turned away from the fire

3.1.2. Test result

Table 1 load conditions

Fire scenario:	Unit temperature curve
Load applied:	5 kN/m ²

Table 2 results of the multi-layer wooden floor

Test duration [min]	90
Load-carrying capacity	90
Time until collapse [min]	--
Deformation criteria exceeded after [min]	--
Room closure	90
Time until ignition of the cotton ball [min]	--
Time until development of constant flames [min]	--
Time until failure of the column criterion [min]	--
Thermal insulation	90
Time, mean temperature increase on the side not exposed to flames exceeds 140 °C [min]	--
Time, maximum temperature increase on the side not exposed to flames exceeds 180 °C [min]	--

Table 3 overall result

Test method	Parameter	Test result
		(min)
ÖNORM EN 1365 - 2	R	90
	E	90
	I	90

4. Classification and area of application

The classification was carried out in compliance with section 7.3.2. of ÖNORM EN 13501-2.

4.1. Classification

The component as described in section 2.2. is classified as follows with reference to its fire resistance characteristics:

REI 90

Test load: 5 kN/m²

Max. span width: 4200 mm

4.2. Direct area of application

The results of the fire test can be applied directly to similar structures on which one or several of the changes described below are carried out and on which the design continues to fulfil the requirements of the respective design standard with a view to their stiffness and strength:

- It is possible to make the floor thicker
- It is possible to make the floor wider
- The tested joint variations are admissible
- Reduction of the gaps between the fastening points
- Reduction of the applied load
- Structural engineering calculations have to be submitted. The maximum torques and transverse forces that are calculated on the same basis as the ones that resulted from the test load must not exceed the ones of the tested ones.

This classification is valid for the structure described in section 2.2.

5. Validity

The validity of this classification report is fixed to five years from March 2017 to March 2022.

This document is no type approval or certification of the product.

HOLZFORSCHUNG AUSTRIA




Dipl.-HTL-Ing.ⁱⁿ Irmgard Matzinger
Authorised signatory



Dr. Bernd Nusser
Head of Unit

1 Appendix

Accreditation is given for the following procedures.
 It is not allowed to use included accreditation marks for own purposes.

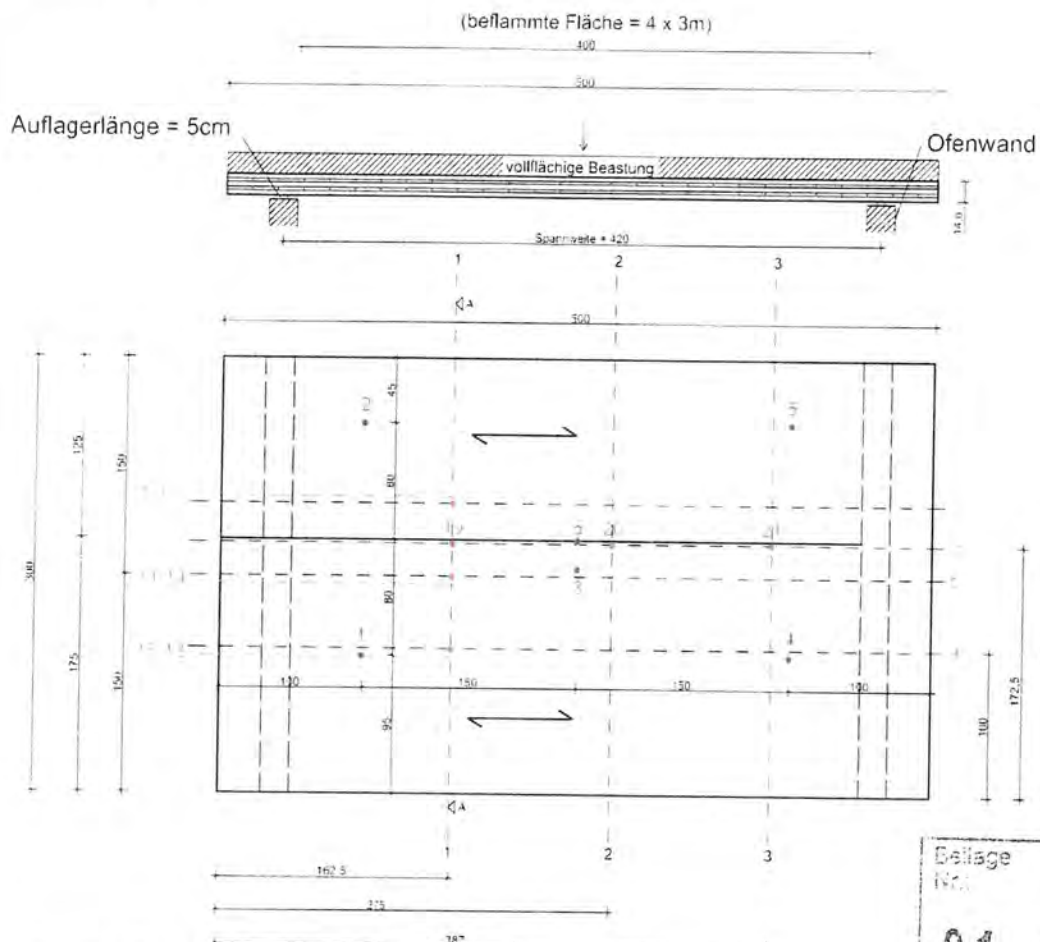
Accreditation mark	Type of accreditation	Method
	Inspection	<ul style="list-style-type: none"> • ÖNORM EN 13501-2

The results and statements given in this document relate only to the tested materials, the present information and the state of the art at the time of investigation.
 Publication in excerpts is only permitted with the written approval of Holzforschung Austria.

In case of dispute the original German version prevails. This translation is for information purposes only.

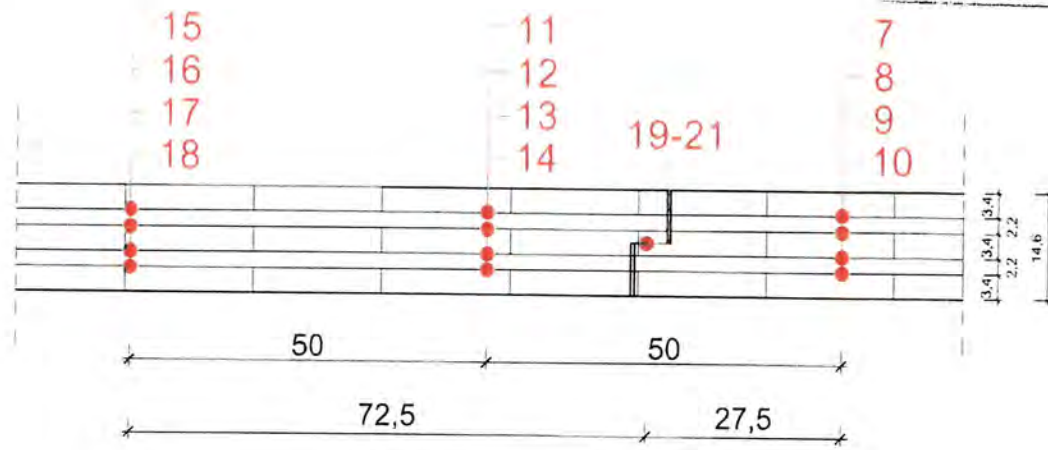
Ansicht / Draufsicht

M = 1:50



Schnitt A - A

M = 1:10



Beilage zu Auftrag
Nr.: 01 0509 17
HOLZFORSCHUNG AUSTRIA
Lang GmH-Strasse 7, 1030 Wien

Versuchsdaten:

- Belastung ~500kg/m²
- Verschraubung / Plattenstoß / verschraubt 6x140 mm, a ~ 200mm
- Verformung in Feldmitte zufolge Eigengewicht+Belastung ~ 10mm
- Temperaturelemente 1-6 => MA39 abgekehrte Seite
- Temperaturelemente 7-21 => HFA lt. Plan

Projekt Auftrag KLH	Plannummer/Planinhalt 001/Versuchsaufbau-Decke	
Planverfasser/Datum SK/03.06.2009	Maßstab 1:10, 1:50	
		<small>Pfad Fertigprodukte/Khan/Arbeit 2008 BG...</small>