TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Technical and Test Institute for Construction Prague
Akreditovaná zkušební laboratoř, Autorizovaná osoba, Notifikovaná osoba, Oznámený subjekt, Subjekt pro technické posuzování, Certifikační orgán, Inspekční orgán / Accredited Testing Laboratory, Authorized Body, Notified Body, Technical Assessment Body, Certification Body, Inspection Body. Prosecká 811/76a, 190 00 Praha 9 - Prosek, Czech Republic

FIRE RESISTANCE CLASSIFICATION REPORT
According to ČSN EN 13501-2+A1

N°: PKO – 16 – 044/AO 204

For the product

Internal load-bearing walls NOVATOP

Provided on the basis of U-010/16/AO 204

Order N°:	Z 080150180.1
Registration number:	080 – 020319
Customer:	AGROP NOVA a.s. Ptenský Dvorek 99 798 43 Ptení

Normative documents:

- ČSN 73 0810.2013: Fire protection of buildings – General requirements
- ČSN EN 1365-1: Fire resistance tests for load-bearing elements – Part 1: Walls
- ČSN EN 13 501-2+A1: Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests

Document contains: 6 pages

Technický a zkušební ústav stavební Praha, s.p. Požární bezpečnost staveb

Number of copies: 3
Copy number: 1

1. Introduction

Subject of the Fire Resistance Classification Report are load-bearing timber walls, with utilization of the extended application of test results carried out in accordance with European Standards. This Report determines the classification in conformity with the procedures given in ČSN EN 13501-2+A1.

2. Detailed information on the classified product

2.1. Generally

The product is used as a fire resistant wall.

2.2. Product description

Evaluated are the load-bearing wall constructions. Implied load 20 $kN.m^{-1}$ or less.

2.2.1. Load-bearing internal walls from NOVATOP "B" panels, 84 mm thick (Fig.1) and **"C"** 124 mm thick (Fig.2), consist of the following parts – solid timber 2 × 42 mm = 84 mm thick (B) and 2 × 62 mm = 124 mm thick (C).

2.2.2. Load-bearing walls NOVATOP 104 thick consist of the following parts:

- Gypsum wood-fibre board Fermacell 10 mm thick (int.)
- Solid timber wall NOVATOP 2 × 42 mm thick
- Gypsum wood-fibre board Fermacell 10 mm thick (int.)

2.2.3. Load-bearing walls NOVATOP 134 mm thick consist of the following parts:

- Fermacell 2 × 12.5 mm thick
- Panel NOVATOP 84 mm (2 × 42 mm) thick
- Fermacell 2 × 12.5 mm thick

2.2.4. Load-bearing walls NOVATOP 144 mm thick consist of the following parts:

- Fermacell 2 × 15 mm thick
- Panel NOVATOP 84 mm (2 × 42 mm) thick
- Fermacell 2 × 15 mm thick

2.3. National evaluation – reaction to fire according to ČSN EN 13501-1+A1

- **Solid wood** – reaction to fire **"D-s2, d0"** according to ČSN 73 0810 item A.1.4.
- **Gypsum wood-fibre board Fermacell** - reaction to fire **"A2-s1, d0"** according to ETA-03/0050.

2.4. Determination of construction type

Wall constructions double-faced with FERMACELL boards are composite constructions of DP2 type for the time period before the non-combustible boards fall off (timber burning-off, i.e. the temperature on the timber increases to 300 °C), after that they are constructions of DP3 type.

Temperature of 300 °C on the timber under Fermacell jacket 10 mm thick has been reached in the 18th minute; on the timber under Fermacell jacket 2 × 12.5 mm thick in the 54th minute; on the timber under Fermacell jacket 2 × 15 mm thick this temperature has not been reached for the whole 60 minutes time period.

Walls are double-faced with Fermacell boards 10 mm thick, or 2 × 12.5 mm, or 2 × 15 mm; therefore are they regarded as wall constructions DP 2 – 15 (45 or 60) minutes.

TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Pobočka Požární bezpečnost staveb
190 00 Praha 9, Prosecká 811/76a
IČ 00015679 (1)

3. Evaluation of the considered constructions

The conclusive fire resistance values of the load-bearing internal walls have been determined in conformity with ČSN 73 0810 requirements and on the background of test results carried out according to ČSN EN 1365-1. Detailed evaluation and the application of fire resistance test results is given in the Report U-010/16/AO 204. The evaluation was performed for the constructions described in Chapter 2.2.

4. Classification and the field of direct application

4.1. Classification reference

The classification has been carried out in conformity with item 7.5.2. of ČSN EN 13501-2+A1.

4.2. Classification

The product – internal load-bearing walls 84 are classified according to the following combinations of property and class parameters.

4.2.1. Internal load-bearing wall B 84 mm thick in composition see 2.2.1.

RE		20	30	45			
REI	15	20	30	45			

Internal load-bearing wall B, 84 mm thick **REI 45 DP3**

4.2.2. Internal load-bearing wall C 124 mm thick in composition see 2.2.1.

RE		20	30	45	60		
REI	15	20	30	45	60		

Internal load-bearing wall C, 124 mm thick **REI 60 DP3**

4.2.3. Load-bearing wall NOVATOP 104 mm thick in composition see Chapter 2.2.2.

RE		20	30	45	60		
REI	15	20	30	45	60		

Internal load-bearing wall 104 mm thick **REI 15 DP2; REI 60 DP3**

4.2.4. Load-bearing wall NOVATOP 134 mm thick in composition see Chapter 2.2.3.

RE		20	30	45	60		
REI	15	20	30	45	60		

Internal load-bearing wall 134 mm thick **REI 45 DP2; REI 60 DP3**

4.2.5. Load-bearing wall NOVATOP 144 mm thick in composition see Chapter 2.2.4.

RE		20	30	45	60		
REI	15	20	30	45	60		

TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Pobocka Požární bezpečnost staveb
190 00 Praha 9, Prosecká 811/76a
IČ 00015679 (1)

Internal load-bearing wall 144 mm thick **REI 60 DP2**

4.3. Field of direct application

In conformity with ČSN EN 13501-2+A1 and ČSN EN 1365-1 this test results can be directly applied even to walls, where one or more of the following modifications have been made, provided that the rigidity and stability of the construction continues to meet the relevant design standard:

1. Height decrease
2. Wall thickness increase; decrease not allowed
3. Increase of component materials thickness (solid timber); decrease not allowed
4. Decrease of the distance of boards fixing centres
5. Load of 20 $kN.m^{-1}$ or less
6. Reaction to fire of the materials used is identical or smaller
7. Construction rigidity is not decreased
8. Height increase up to 4 m (provided the maximum deflection is not exceeded

5. Provision of the utilization

5.1. Limitation

This Classification Report is valid up to **2021-04-19**, provided the product or the standard provisions will not be changed.

5.2. Warning

This Classification Report is valid as a whole only; each and every page must be provided with the Classification Report identification number, with page number of the total pages and with the author stamp. This Classification Report does not substitute either the type approval or the product certificate.

Ing. EVA JINDŘICHOVÁ autorizovaný inženýr pro požární bezpečnost staveb ČKAIT - 0005270

Technický a zkušební ústav stavební Praha, s.p. TZÚS Požární bezpečnost staveb

Prepared by:
Ing. Eva JINDŘICHOVÁ

Approved by:
Ing. Iveta JIROUTOVÁ
Managing Director
Branch 0800 – PBS
TZÚS Praha s.p., AO 204

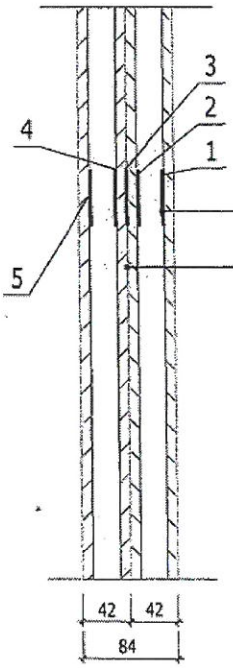
Praha, 2016-04-19

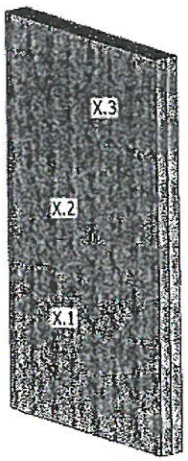
Internal load-bearing wall NOVATOP "B" – Fig.1

NOVATOP
CLEVERLY DESIGNED

TYPE B

M 1:5





FIRE LOAD SIDE
ACCORDING TO THERMOCOUPLE POSITIONS

INTERNAL WALL 84 / F45
Innenwand

M 1:5

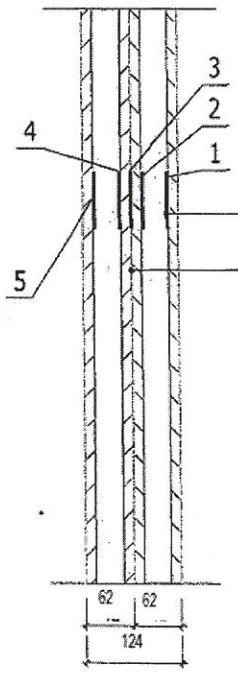
TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Pobocka Požární bezpečnost staveb
190 00 Praha 9, Prosecká 811/76a
IČ 00015679 (1)

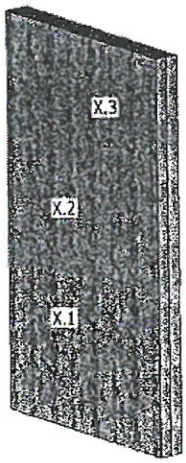
Internal load-bearing wall NOVATOP "C" – Fig.2

NOVATOP
CLEVERLY DESIGNED

TYPE C

M 1:5





FIRE LOAD SIDE
ACCORDING TO THERMOCOUPLE POSITIONS

INTERNAL WALL 124
Innenwand

M 1:5

TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Pobočka Požární bezpečnost staveb
190 00 Praha 9, Prosecká 811/76a
IČ 00015679
(1)