Blümlimattweg 15, Thun

2021

At Blümlimattweg 15 in Thun, Switzerland's first apartment building with a basement made of wood with TS3 joints was built. The building is also the Living Lab of the DeepWood research project and has innovative approaches to building physics.

The project

An apartment building full of innovations was built in Thun. No concrete or steel was used in the entire house with 5 residential units - not even in the basement. No steel was used - not even in the basement. Cross-laminated timber panels lie on top of a 160 mm thick insulation board. Black insulation encases the wood for moisture protection. The interior walls are non-load-bearing; columns and the exterior walls support the cross-laminated timber floor slab. Thus, the basement is very flexible in use and can be used in many ways, thanks to the pleasant indoor climate due to the visible and tangible wood.
The house in Thun is also the living lab of the research project DeepWood together with the Lucerne University of Applied Sciences and Arts and the Bern University of Applied Sciences. With DeepWood, the planning methods of Building Information Modeling (BIM) are are being further developed.

The construction

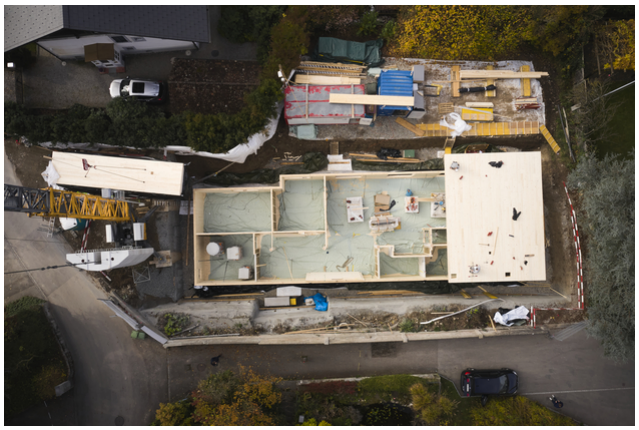
The basement is a solid wooden structure made of cross-laminated timber panels. TS3 joints allow the floor slabs without joists. The exterior walls in timber frame construction are optimally insulated, which makes it possible to dispense with a heating system. After all, there is no conventional heating system in this building. Instead, there are Swedish stoves in the apartments and a warm air supply as a backup.

The challenges

The Blümlimattweg was the first time 45-degree joints were grouted in a construction project. Experience TS3 had only gained experience with this from research projects. Another challenge of this project were the cold temperatures during grouting. For the first time winter construction measures had to be developed and used. The joints were locally heated.

From the outside and inside: Timber remains visible and gives the building a pleasant atmosphere.

TS3 technology allows for a column-and-slab construction method. The TS3 joints remain visible in this project.



What seemed impossible for a long time is now a reality: Thun is home to the first apartment building with a basement made entirely of timber.

Timber in the basement creates comfortable spaces for various uses

Construction data

- Number of floors: 3
- Gross floor area: 998 m²
- Cross laminated timber: 178 m³
- TS3 technology: 360 linear meters of joints

Architecture
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