

Apartment houses Holleracher, Grossaffoltern

2019



Four apartment buildings with TS3 floor slabs were built in Grossaffoltern in the Bernese Seeland region. This is the first residential development worldwide to use the innovative technology.

The project

The three-story residential development with 20 comfortable apartments with a far-reaching view is located in Hollerenacher in Grossaffoltern between Bern and Biel. The sustainably built timber buildings in Grossaffoltern are the first in the world to use TS3 technology. This means that the floor slabs of the buildings consist of large-format cross-laminated timber panels that are glued together at the ends using TS3 technology. In addition to a pleasant indoor climate, this allows maximum flexibility of use. Timbatec engineers were responsible for the structural analysis. TS3 AG bonded the face joints on site.

The construction

Prefabricated timber elements were erected on the concreted floor slabs. The glulam panels, measuring 13 by 2.5 meters, were glued together at the construction site to form the floor slabs. A total of 2300 square meters of floor slabs were glued and installed in the four apartment buildings.

The challenge

The impregnation of the end faces of the cross-laminated timber panels presented a major challenge. At present, this work step cannot yet be carried out in the glulam manufacturing plant. Therefore, a tent with a construction crane was erected near the construction site. This allowed the panels to be prepared and precisely glued into floor slabs at the construction site.



Delivery of CLT panels to the construction site



Assembly of CLT panels on the construction site



Grouting of a joint with TS3 technology



Supports and slabs in the shell

Construction Data

- Cross laminated timber 230 m³
- Joints with TS3 technology
- round timber supports 12 pieces

Services of Timbatec

- TS3 statics
- Site control
- Joint bonding with TS3 technology

Timber construction engineer

Timbatec Holzbauingenieure Schweiz AG

GU/woodworker

Stuber & Cie AG
3054 Schüpfen

End gluing cross laminated timber

TS3 Timber Structures 3.0 AG
3600 Thun

Architecture

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