

TS3 Stairs by Naikoon Contracting, Vancouver



In early January 2019, the first staircase using TS3 technology was installed. The showcase project was completed in Naikoon Contracting's new office building in Vancouver.

The Project

Using Timber Structures 3.0 technologies, wood components are glued together, including at their ends. This allows for the creation of load-bearing components in multiple directions. As a result, TS3 can be used not only in floor slabs but also in folded structures, such as staircases. The staircase at Naikoon Contracting consists of twenty individual cross-laminated timber (CLT) components that were glued together on-site. The double-run staircase with an angled landing has 16 steps. The first run is 2.8 meters long, and the second measures 2.3 meters.

The Construction Method

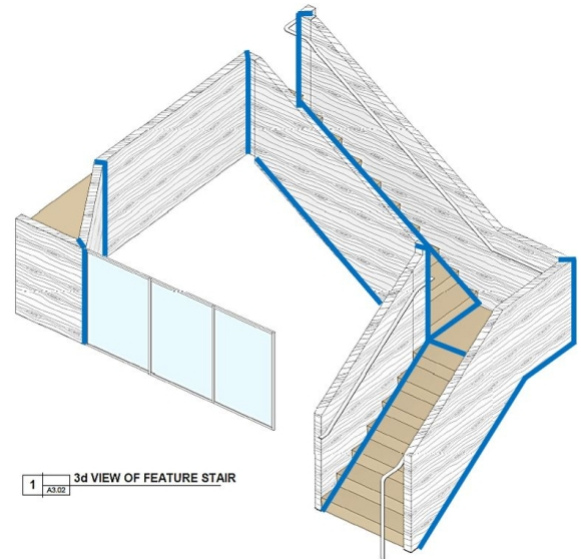
For the successful application of TS3 technology, the end faces of the components to be bonded must not be dented or damaged and were impregnated with the TS3 pretreatment. The finished components were positioned on the construction site using scaffolding and fasteners. Subsequently, all joints were sealed and finally bonded.

The Challenges

Accessibility for filling the joints was very difficult in some areas and could only be achieved thanks to the flexible filling nozzles. Sealing the miter joints to prevent adhesive from leaking out was also a major challenge.



The first staircase with TS3 technology



Panel division

Construction data

- TS3 cross-laminated timber: 40 m²

Client

Aspect Structural Engineers Vancouver BC, Canada

Timber construction

Naikoon Contracting Vancouver BC, Canada