

Working platform Flück Holzbau AG, Wangen bei Dübendorf

2018



With the TW-Agil 3000, Flück Holzbau AG has installed a joinery system that is unparalleled in Switzerland. For the processing of the cut timber elements, the timber construction company commissioned Timbatec and TS3 with the construction of a wooden working platform.

The initial situation

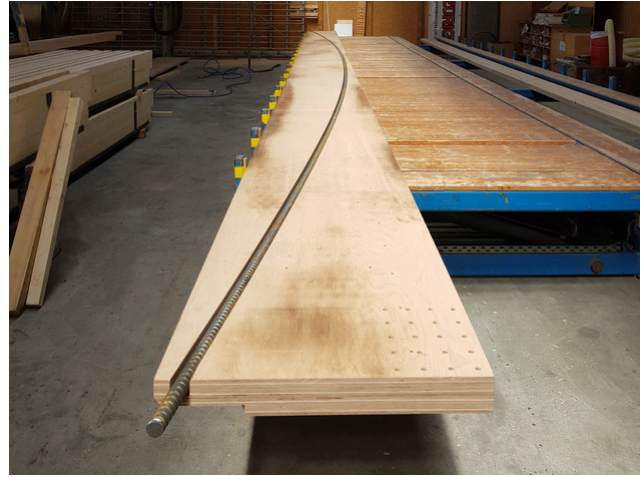
The new work platform of Flück Holzbau AG in Wangen near Dübendorf is 15 meters long, 7.5 meters wide, 36 centimeters thick, weighs 18 tons - and is largely made of wood. It is used to process the timber elements from the newly installed TW-Agil 3000 joinery system, which has an inlet width of 3000 millimeters.

The challenge

The enormous spans combined with the high payloads posed a major challenge for the timber construction. The platform consists of three cross-laminated timber panels, which were glued together to form one large panel using TS3 technology. In order to relieve the adhesive tension side and to minimize deflection and vibrations, the panel was eccentrically prestressed with tie rods.

The height of the platform's girder, which is stretched over the entire 15 meters, was limited. The reason: The feeder for the panel processing line was to be located on the lower side, and the girder was not to protrude too high above the platform on the upper side so that the forklift truck could transport the packages with the wood away.

The girder height therefore had to be limited to 700 millimeters. For this reason, a high-performance beam made of laminated beech veneer lumber was used. However, the deformations became too high with this. For this reason, two steel tie rods were inserted in the girder in the shape of a fish belly and prestressed. On the one hand, this allowed the girder to be raised, and on the other hand it made the girder stiffer and reduced the deformation.



Construction data

- Cross laminated timber: 40 m³
- beech laminated veneer lumber: 3 m³
- Platform area: 110 m²

Timber construction engineer

Timbatec Holzbauingenieure Schweiz AG, Zürich
8006 Zürich

Building owner

Flück Holzbau AG
8602 Wangen bei Dübendorf

Butt-joint bonding of CLT

TS3 Timber Structures 3.0 AG
3600 Thun