

The Tüfisteg pedestrian and bicycle bridge, Adliswil

2020



The Tüfisteg pedestrian and bicycle bridge in Adliswil is getting on in years. Analyses showed that replacing the bridge would cost almost as much as renovating it. Today, a new bridge leads over the Sihl - with beech wood from the surrounding forests.

The project

Since 1932, the Tüfisteg has formed an important link across the Sihl and is also part of the Sihlufurweg, which is actively used by the people of Adliswil. The bridge from 1932 was already replaced by a new bridge in 1985. Now, 45 years later, this bridge has also reached its zenith. In a first step, the company Timbatec was commissioned to record the condition of the existing bridge. The analyses showed that the bridge would have to be comprehensively rehabilitated or replaced immediately. The city of Adliswil decided to build a new bridge in the same style. The bridge in Adliswil is the first bridge in Switzerland with a pure beech wood construction.

The construction

The 45-meter-long blast structure was planned and executed entirely with beech wood from the region. For the highly loaded compression bars, packages of small bar cross-sections were assembled rather than the usual large glued-together cross-sections. This allows for better structural and chemical wood protection. This is because the components can dry more easily and be better impregnated.

The challenge

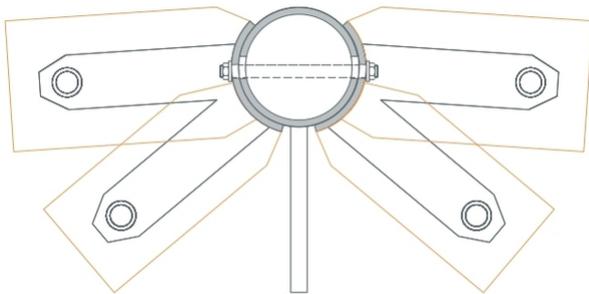
The planning of an open bridge with beech wood requires precise planning of the construction as well as the construction process from the cutting of the logs to the finished bridge. The close cooperation of the planners with the sawmill, the impregnation plant and the good communication were the key to success.



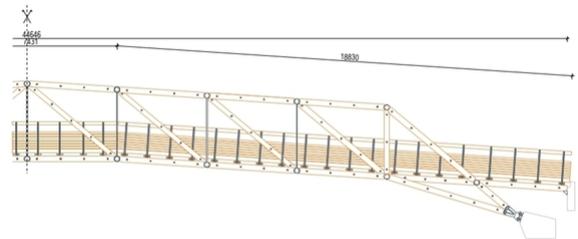
The new Tüfisteg



Assembly work on the bridge



Hub



Section bridge

Construction Data

- Solid beech wood 26 m³
- Steel 10 t

Construction costs

- BKP 1-9: 650,000 Swiss francs

Services of Timbatec

- SIA Phase 11 Condition analysis
- SIA Phase 21 Structural analysis
- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- SIA Phase 52 Execution
- SIA Phase 53 Commissioning
- Structural analysis and design
- Cost estimation
- Technical site supervision and site inspections

Architect

Timbatec Holzbauingenieure Schweiz AG, 8005 Zurich

Client

City of Adliswil, 8134 Adliswil

Timber construction engineer

Timbatec Holzbauingenieure Schweiz AG

Timber construction

Holzbautechnik Burch AG, 6060 Sarnen

Construction management

Timbatec Holzbauingenieure Schweiz AG

Photography

Nils Sandmeier, 2501 Biel

Impregnation plant

Imprägnierwerk AG, 6130 Willisau

Wood cutting

Konrad Keller AG, 8476 Unterstammheim