# New construction indoor swimming pool, Frutigen

2007





In 2006, the Frutigen indoor swimming pool was destroyed by fire. The demolition of the supporting structure made way for a new indoor swimming pool. In order to design a contemporary indoor swimming pool, the client invited an architectural competition.

# The project

The new swimming pool is intended to expand the offer and the possibilities of use and to increase the attractiveness. The technical facilities will also be renewed and adapted to today's standards. The new wooden building will be built in line with the existing restaurant and the checkroom wing. Thanks to the large window front, the beautiful view can also be enjoyed while swimming. The main supporting elements of the roof consist of approx. 20 m long glulam beams. To make the view of the mountains even more inviting, the single-span girders were tapered towards the window front. The trusses are supported on pendulum columns and stabilized by the roof slab and walls. Tabs hidden in the wall structure provide the fork bearing. In order not to interfere with the view, the trusses at the glass front are supported on filigree steel columns. The stabilization of the transition from the concrete column to the glulam beam is solved with glued-in threaded rods (GSA system). This invisible fork bearing also serves as transverse pressure reinforcement.

## The construction method

The secondary supporting structure consists of box girder elements that were prefabricated and fixed to the glulam beams. The building is braced on the one hand by the existing concrete wall of the checkroom building and on the other hand by bracing timber walls. In order to transfer the large forces, a brace frame is integrated in one wall slab. The roof is braced by OSB panels, which also stabilize the main structure. The walls consist of a prefabricated frame construction.





Interior view towards swimmer pool



Interior view towards restaurant

#### **Construction Data**

Span of single span girder: 20 mNew building hall: 20.8 x 50 m

- Floor plan area: 1'050 m<sup>2</sup>

## **Construction costs**

- BKP 1-9: 6.5 Mio.

### **Services of Timbatec**

- SIA phase 31 preliminary project
- Cost estimate
- SIA Phase 32 Construction project
- Structural analysis and design
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- Site supervision and site inspections



Interior view towards the non-swimmer pool



Shell interior view

### **Timber Construction Engineers**

Timbatec Holzbauingenieure Schweiz AG, Thun 3600 Thun

## Client

Sportzentrum Frutigen AG 3714 Frutigen

## **Architect**

Itten + Brechbühl AG 3013 Bern

#### **Architect Execution**

Kaspar Giovanelli AG 3714 Frutigen

#### **Timber construction**

ARGE c/o Bärtschi Holzbau 3714 Frutigen

