

# School extension, Courrendlin



The village of Courrendlin is building a new secondary school linked to the existing school complex. The design is a hybrid, combining wood and concrete as the load-bearing structure.

## The project

The first part of the Courrendlin school centre has been completed, and secondary school pupils have taken possession of their brand new premises. This first part concerns the building for secondary school pupils, with a capacity of fifteen additional classrooms. A second building will be erected in the same sector to accommodate the youngest pupils. The vertical load-bearing structures are made of reinforced concrete and are visible from the outside. The slabs of the various classrooms are made of wood and used in a short circuit. They are supported by wooden linings that incorporate the building's thermal insulation.

## The construction method

A mixed wood/concrete slab was used for the classrooms on the first floor, with a reinforced concrete slab on the ground floor. Insulated wooden elements form a vertical support for the slabs, which are horizontally stabilised by the reinforced concrete exterior walls via a reinforcement connecting them to the concrete. Envelope elements set into the external walls clad the facade to complement the concrete.

## The challenge

The management of thermal bridges, and in particular the risk of condensation in the timber structure, was an essential element in this project, with a cold load-bearing structure. A specific support detail was therefore developed especially for this project to guarantee the durability of the supports.



Corridor



Claustate

#### Construction Data

- Wooden surfaces : 430 m<sup>2</sup>
- Wooden roof surface : 430 m<sup>2</sup>
- Net volume of wood used : 175 m<sup>3</sup>

#### Construction costs

- BKP 1 à 9 : 8.8 millions CHF (incl. VAT)
- BKP 214 : 555'000 CHF (incl. VAT)

#### Services of Timbatec

- SIA Phase 31 Preliminary project
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Execution project
- SIA Phase 52 Execution
- SIA Phase 53 Commissioning
- Statics and construction
- Cost estimate
- Managing the flow of timber and forest resources throughout the process

#### Building owner

Administration communale de Courrendlin  
2830 Courrendlin

#### Architect

Daphné Karaiskaki Architecture  
75020 Paris

#### Architect

Stähelin Partner Architectes SA  
2800 Delémont

#### Timber construction

Batipro SA  
2882 St-Ursanne

#### Client

Administration communale de Courrendlin  
2830 Courrendlin

#### Sawing of communal timber

Scierie Rais Paul SA  
2823 Courcelon JU

#### Gluing the communal timber

Fagus Suisse SA  
2345 Les Breuleux JU