

# CLOS PACHEM

## The construction stages of the building

[www.clospachem.com](http://www.clospachem.com)

Carrer de la Font 1D  
43737 Gratalllops | Priorat  
Spain

Initially one third of the building plot was occupied by a derelict building comprising of a ground and first floor (*see photo 1*). The rest of the plot was empty except for some wild vegetation which had appeared over time.

Most of the building was demolished with the exception of the boundary walls and some parts of the wall facing Piró street, with the intention of integrating these into the new building. (*see photo 2*)

After demolition, the basement was excavated so that the barrel room and the bottled wine storage area could be built. The instability of the ground, the characteristic Priorat licorella led to some difficulties with regard to the excavation. (*see photos 3, 4*)

At the same time, the foundations and retaining walls defining the new basement areas were concreted in a reticulate pattern using reinforced concrete. (*see photo 5*)

Once completed, these areas were capped by a load bearing reinforced concrete slab with the idea of supporting the future wine tanks to be placed on top. (*see photo 6*)

Having completed the roof of the basement, the building above ground was constructed using a 25 x 10 m in area and almost 10 m high ceramic brick box. This was accomplished using 176,267 ceramic brick units placed in perfectly defined rows, carefully executed due to the high level of technical challenge.

Singularities of the ceramic construction:

—In the southern facade, the closure is constructed of 7 ceramic walls in layers, each one 11.5 cm thick and each separated by 13.5 cm spaces, leading to a total thickness of 161cm (*see photo 7*)

—A total of 721 linear metres of ceramic beams were constructed with the same ceramic bricks as those used in the walls. These beams were first of their kind, requiring various tests and samples to find out the best fabrication procedure to build them (*see photo 8*)

—The roof of the vault was constructed at 8.75 metres from ground level and is formed by inverted concrete T beams, which are practically hidden from sight, and a truss of ceramic beams over which ceramic walls rest forming a lattice allowing the flow of air. A concrete compression layer above a ceramic pavement forms the top. (*see photo 9*)



—A novel type of ceramic floors were also constructed, consisting of in-situ concrete webs 17 cm wide, with the 10 cm wide spaces between webs fabricated with the same ceramic bricks used to construct the load bearing walls of the building. (*see photo 10*)

—At various points along the facades, the vertical joints of the walls were partially emptied of mortar, in order to permit the flow of air and ventilation of the air gap between both layers in the facades.

The ceramic walls of the passage had to be erected simultaneously as they were due to support various interior and exterior flooring slabs. This made for a very vast array of scaffolds, form systems. (*see photo 11*)

Once the building erection was complete, the east roofing elements were constructed. It is worth pointing out that the vaults roofing is flooded by water and in two distinct levels, where depending on the time of day water flows between both levels. Also, the roofing of the passageway is filled with vegetation and stepped at different levels, so that water can flow from one to the other. (*see photos 12, 13*)

Finally, all the interior finishes were done: concrete and ceramic pavements, both interior and exterior wooden windows and doors, stairs and galvanized banisters. (*see photo 14*)

All constructive processes mentioned above, as well as the building's installations were simultaneously fitted during the construction process as most lie hidden behind the ceramic walls.

We are very satisfied with the end result. All the hours of dedication, the effort destined to the construction phase, has all been well worth it.

We have to thank everybody involved in the construction of the winery, especially those who have been present at the site to overcome the difficulties and challenges which have developed over time in relation to the construction process.

CARLES BOU, architecture technician



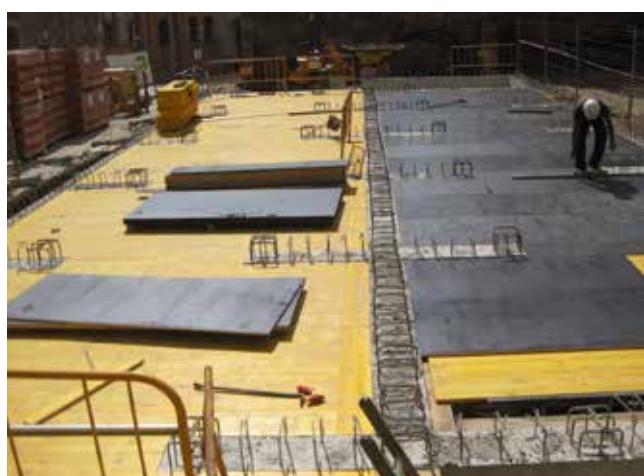
1-2



3-4



5-6

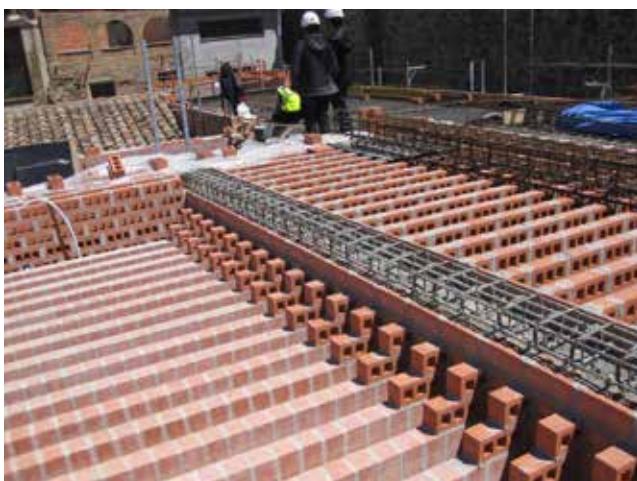




7–8



9–10



11–12





13–14

