

New Lleida Art Museum

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ABSTRACT :The rehabilitation of the former medieval building “La Panera” and its reconversion into a museum centre is an action that integrates tradition and modernity in the use of environmental strategies.

Keywords:

1. Introduction

The museographic project that lies on the basis of the architectural action aims for the creation of a museum complex in which a Contemporary Art Centre, located in the rehabilitated building “La Panera”, and the new quarters of Morera Museum, placed in a completely new annexe, can coexist; thence, the old building would be habilitated to hold large-sized designs in the field of Contemporary Art, and the new building would be destined for the exhibition of the present Morera Museum art collection, which is now located in a building that will soon become a state-run tourist hotel, and everything would constitute a sole architectural unit, sharing services and management with the object of optimizing space and resources. The project is being carried out in phases: In the first phase, the Contemporary Art Centre has been built and in the second phase Morera Museum is scheduled to be soon started.

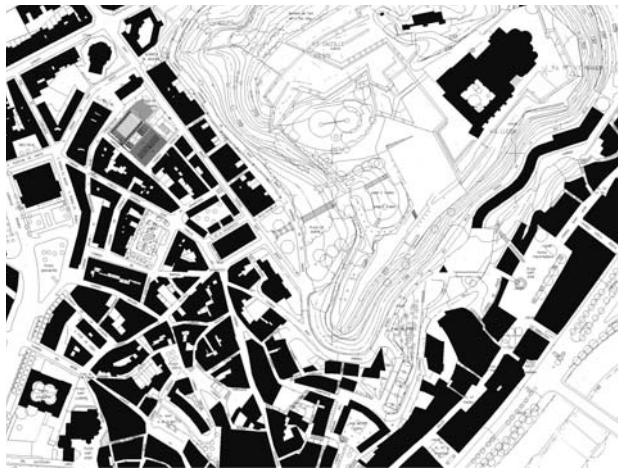


Fig1. Location



Fig2. Context

2. Location and context

The museum is located in Lleida historic centre, next to medieval church San Martín and “La Panera”, emblematic building that illustrates the difficulty of dealing with subjects concerning historical memory:

Its historical roots showed that it is a medieval building, deeply transformed over the centuries and the essential thing concerning its Architecture was camouflaged under the successive remodellings carried out in the first half of the XII th century, the second half of the XIX th and, the most recent in the last XX th century.

The history lesson and the evidence of the constructive systems have permitted the identification of the most important episodes in the former building's life:

XII th- XIII th century. “Almodí Vell”

Between the XII th and XIII th centuries, coinciding with the “Consulat” period, which was one of the most flourishing moments of Lleida medieval economy; it was “Almodí Vell”, the city contracting market.

1607 “La Panera” or “Botiga dels Canonges”

In 1606, “Almodí” is acquired by “Pia Almonia”, the “Cathedral Canonry”. A new floor will be erected upon the former “Almodí” colonnade. In that large repository, as a medieval warehouse, Canons stored and sold the products that were picked in their properties, specially

cereals, wine and oil, so the place was named "Botiga dels Canonges" or "Panera" after it.

1860. The Cavalry Quarters

In 1835, as a consequence of the sale of church lands, it becomes the property of the Town Council (La Paeria), which will in turn transfer it to the Army in order to place the Cavalry Military Quarters there in 1860. The works at that time consisted in adapting the former warehouse to set the Cavalry Regiment; the ground floor was lowered below the level of the medieval building and a new level was built which permitted the stables to be installed on the lower ground floor.

In 1947, the Army moved to the new installations located on Gardeny tableland, becoming then the National Police Headquarters, being remodelled again and occupied until the eighties, when the building "La Panera" definitely reverted to Lleida City Council.

3. Functional organization

The first projectual decisions start from the wish of preserving the immense volume of the building "La Panera" and its formal autonomy inside the whole, and it may be the reason why a spectacular solution is taken; from the rectangular plan of the present building "La Panera", and taking it as a reference, the new building is designed with a plan whose dimensions are substantially the same, and the entrance hall is located between both buildings: a big vestibule with a zenithal lighting and ventilation which will contain the main access, the interior vertical connections, the horizontal connections between the top floor rooms of both museums and the common services of the entire complex.

The museum as a whole respects the formal autonomy of the former building, maintaining the volumetric force that has been representing a city mark since the XVII th century and conserves its alignment of the façade in relation to S. Martí street in order not to affect the view of medieval church S. Martín at the back.

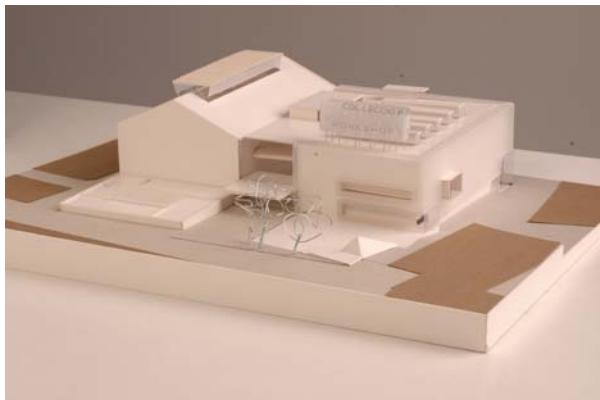


Fig 3. view of the model



Fig 4. external view



Fig 5. internal view through the hall

4. Structure, constructive systems, materials and finishes

As a general strategy, the building has been fitted with high-inertia constructive elements and systems in order to temper their thermic response in view of the sudden seasonal changes of the continental climate in Lleida. In the renovated medieval building, the 80 cm mud walls still remain, being stabilized with a metal structure. From the medieval building, the stone colonnade with circular shaft and austere capitals has been kept, and a new level, formed by a concrete slab with a technical floor as a passage for every installation has been built. On the top floor, wholly destined to be an exhibition room, a big skylight with a slat protection has been built to avoid solar radiation.

The new building has been projected with concrete walls and level that have a double external skin consisting of perforated metal sheets, which constitute not only a thermic temperer but also a transitional space containing installations and evacuation ways, and it permits the introduction of dynamic effects all over the day, since it becomes transparent or opaque depending on the angle of solar radiation incidence. During the night and by means of floodlights that illuminate it and reflect the light towards the outside, it will become a façade of changing colours which will give new energy to a currently depressed and dark suburb.

It will have a landscaped roof in order to return the city a part of the ecosystems that the urbanization process destroys.

In the subsoil, a "labyrinth" of concrete walls has been planned, which will allow the exterior air either to be tempered and to bring it directly to the interior of the building for its natural cooling or to conduct it to the heat pumps that supply the mechanical air conditioning.



Fig 6. View of the top floor exhibition room.

5. Environmental strategy

The building is conceived with passive solar design strategies to exploit natural energy to the maximum, active exploitation of renewable energies and digital technologies of regulation and control to achieve energy saving and efficiency.

Constructive systems of the maximum thermic inertia to temper the sudden exterior changes in temperature.

Reduction of the thermic solar charge by way of a double skin which will prevent direct solar radiation on the building fabric.

Natural lighting of the top floor rooms by using well-positioned zenithal skylights, protected from solar radiation.

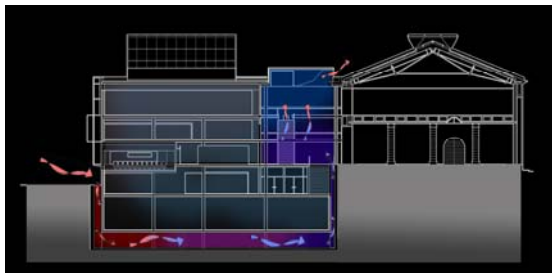


Fig 7 : section / environmental strategy: natural air conditioning in the building / labyrinth.

Air conditioning through natural ventilation using the air that has been cooled in a concrete "labyrinth" located in the subsoil of the building, in the time zone that the exterior temperature permits, and optimization of the

mechanical air conditioning system output during the rest of the day.

Landscaped roofs to achieve a better thermic response of the most exposed building façade thus giving the building a natural ecosystem which will permit both improving the quality of air and establishing biotopes.

Photovoltaic roof placed upon the 15 kw skylights.

Regulation and control of all the service installations through central and automated systems to get the maximum energy efficiency.