



El Batel Auditorium and Conference Center

Cartagena, Spain / 2011

Structural type
Characteristics
Owner
Client
Scope
Architect

concrete underground structure, auditorium steel structure, Efte façades
light steel auditorium structures and efte façades
Ayuntamiento de Cartagena
Estudio Arquitectos Selgas - Cano
detailed design and construction support
Jose Selgas & Lucia Cano



The Auditorium and Congress Centre is a building with a capacity for 3,000 spectators spread over six conference halls which is set out with the lineal conception of the docking area of a port which is akin to the city in which the structure is located. One of the main aspects of the Project is its integration to the surroundings, it is therefore partially sunk into the ground and the access to its different areas is fulfilled via ramps.

This 'burying' of the structure in an area where the water table is practically superficial, due to its proximity to the sea, has forced the need to construct a reinforced concrete basin, composed of enormously thick slabs which act as counterweights, as well as a system of perimeter walls which were erected within a system of retaining walls during the excavation process of the precinct and which also act as ballast against flotation regarding the global stability of the structure.

Above grade, the structure is basically steel, with three large column alignments. The two lateral alignments are located on the façades of the building and are composed of columns, specially made of 6 solid steel tubes which are slender in diameter (50 to 60mm) and are pressed together forming two threesome blocks. These columns integrate into the two large transparent

colored methacrylate façades and are therefore visible from both inside and out.

The slabs above grade are generally composite, composed of reinforced beams upon which a system of corrugated sheeting is placed which acts as lost formwork on a strict depth concrete slab.

The inside of the building is noteworthy for the volume of the main auditorium, which has a capacity for 1,500 spectators, and is solved with a system of two large trusses which are embedded in the long façade sides of the building and a stage area which materializes within a large concrete prism upon which the trusses rest.

The building is finished off with several canopies, one situated in the entrance area employing a steel framework and two others in the roof area which employ textile membranes and act as large 60m span parasols.

It has to be highlighted in the Project the existence of two large EFTE façades, which have been executed covering two, very large, practically flat surface areas with EFTE, which are supported employing vertical cables connected to one another and anchored to a large steel frame which offers the equilibrium needed so as not to introduce tensile loads to the rest of the structure.



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