



Azur Arena

Location : Quartier des Trois Moulins, Antibes

Architect : Auer+Weber Architekten (mandataire), Fradin Weck Architecture (associé)

Client : Ville d'Antibes-Juan-les-Pins

Package : Steel structure, Facade

Scope : Technical design and implementation monitoring

Date : 2009-2013

The Antibes sports hall is located in the Trois Moulins development zone on the edge of the Sophia-Antipolis Technopôle. This building is designed to host high-level sporting competitions. It comprises a main hall with a capacity of 5,000 people (dedicated in particular to basketball) and a second volume divided into a trampoline hall and a dojo.

Externally, the building takes the shape of a pebble, with maximum dimensions of around 115m long, 90m wide and 19.5m high. On the inside, the framework of the envelope is completely independent of the concrete structure, allowing the cauldron visible from the glazed forecourt to be showcased, while at the same time creating a majestic ambulatory around the perimeter.

The framework covering the cauldron is made up of a series of steel trusses forming a square mesh measuring 17.50m on each side. These trusses are intersected by secondary purlins and tertiary purlins supporting the envelope. The envelope consists of an acoustic insulation complex sealed with a PVC membrane. The framework rests on bi-articulated posts around the perimeter of the cauldron and inclined bracing rods. It extends all the way up to the façade and over the ambulatory, resting on sloping posts and cantilevering over the entrance to create a canopy. The roof structure also supports all the technical and stage equipment, such as the AHUs (Air Handling Units), a 3-tonne video unit (giant screens and score display), removable grills, etc.

The steel structure of the trampoline hall and dojo is structurally independent from that of the cauldron. It is composed of metal trusses resting on tubular posts arranged around the perimeter of the volume. The metal-clad façades are supported by a steel framework attached to the main structure of the envelope. They are clad with an over-façade of expanded metal. In addition to their slope, these façades feature complex curved areas. Only the main entrance façade is a glazed curtain wall.

The major complexity of the project lay in the design of a large-span structure in a seismic zone, as well as the creation of an envelope that met the seismic requirements and BBC performance standards of the programme.