Roof Structure over Stands at the Dolphinarium in Tenerife

The roof built over the existing stands of the dolphinarium in Tenerife has a covered surface area of 2,300m2 with a 15.0m overhang. The main condition required for the project was to build the roof without interrupting the day-to-day functioning of the Park.

The roof structure consists of five beams with a circular cross section made of epoxy fiberglass, fixed to already existing concrete pillars. Each beam is stiffened by an upper and a lower cable, for pressure and suction purposes, respectively.

Furthermore, between beam and beam, a Kevlar suction cable is placed which provides double curvature to the membrane, allowing suction control.

At the end of the overhang, the beams are connected by means of a perimetrical cable which reduces deformations caused by wind. This cable is held by two masts anchored to two cables which transfer the load to the foundations.

Spain /1998
Project data

Structural type:
Roof structure made of fiberglass beams and PVC membrane
Location:
El Ejido, Tenerife. Canary Islands
Opening date:
1998
Proprietor:
Octopus Park
Construction:
Comercial Marítima
Scope of Works:
Construction Project