





Ephemeral Cathedral

Location : Quartier de Montaigut, Créteil

Architect : Tom GRAY

Client : Association Diocésaine de Créteil

Scope : Conception architecturale et technique ; Suivi de réalisation

Date : 2012–2013

The Cathedral of Créteil, built in 1966, underwent a thorough restructuring between 2012 and 2013 which required its closure for two years. The project owner therefore had to provide a temporary structure to accommodate religious celebrations during the Cathedral's renovation.

Inspired by a previous experience for the Solidays festival, T/E/S/S made the following original proposal to the Diocesan Association of Créteil: that the parishioners themselves participate in the construction of their ephemeral cathedral. Seduced by this proposal, the diocese entrusted us with the task of developing this project in its entirety - from the sketch to the construction - with the help of two partners: the Navier laboratory (Ecole des Ponts et Chaussées) and the Viry company.

The structure is presented as a deformed dome, into which one penetrates through two metallic «cones» housing the accesses. Classified as an ERP, it can accommodate up to 500 people.

The structure imagined is a gridshell, in the spirit of the hall that Frei Otto had realized in Mannheim in the 70s, but constituted here of bent fiberglass tubes, linked together by simple scaffolding connectors.

This mesh is first assembled on the ground and then lifted and shaped by elastic deformation using two mobile cranes. This phase of the project, which is very spectacular, is completed in just a few hours. The structure is then anchored on a peripheral sill, then braced by a third network of tubes. The gridshell is finally covered with a metallic-colored PVC fabric, stretched by lacing on the lower edge and waterproofed.

This type of structure, initially designed by the Navier laboratory, is a first in the construction sector. Its application to the ephemeral cathedral of Créteil required extensive studies and a campaign of laboratory tests to characterize the resistance of the material and the assemblies.

 Gridshell cathédrale éphémère

 Gridshell Solidays 2011