



Engineering Structures for Life



BUILDINGS - SPORTS FACILITIES

Thiqar Sports Complex

ABOUT

GEG pioneer project in [Iraq](#) comprised the design and consultancy for this Sports Complex began in March 2013. The scope included the design, coordination of all engineering disciplines and on-site support.

Thiqar Sports Complex includes a stadium with capacity for 30.000 spectators, a training stadium (500 spectators), a track and field stadium (2.000 spectators), a four-star hotel, with 75 rooms and two sports pavilions (aquatics centre and sports hall). The entire complex has to comply with FIFA standards.

A recognised French architecture office is the responsible for the architecture of the stadiums and hotel. The architecture office MVCC, which has been collaborating with GEG for many years, is responsible for the pavilions' architecture design.

Structural solution

With the purpose of shortening the construction phase, the structural design team chose the [steel structure](#) to be the support for the stands, higher levels and roof. It has also been adopted precast solutions for the grandstands, raker beams and vomitories. Concrete solutions only have been chosen for the lower level.

It has been made a comparison between the adopted solution and a similar structure, entirely of concrete. This comparison had demonstrated the ability and versatility that steel and mixed solutions have on complex design structures. The steel roof is a space truss with a maximum cantilever span of 35 m. The horizontal loads, in particular, the seismic load, have been a constraint on some design aspects.

The foundation system chosen was the [deep foundation](#). This solution led to the analysis of different soil and structure interaction models for the structure and foundations calculation, as well as several sensitivity analyses.

FACTS

Year: 2013-2014

Client: French Company SARL UR

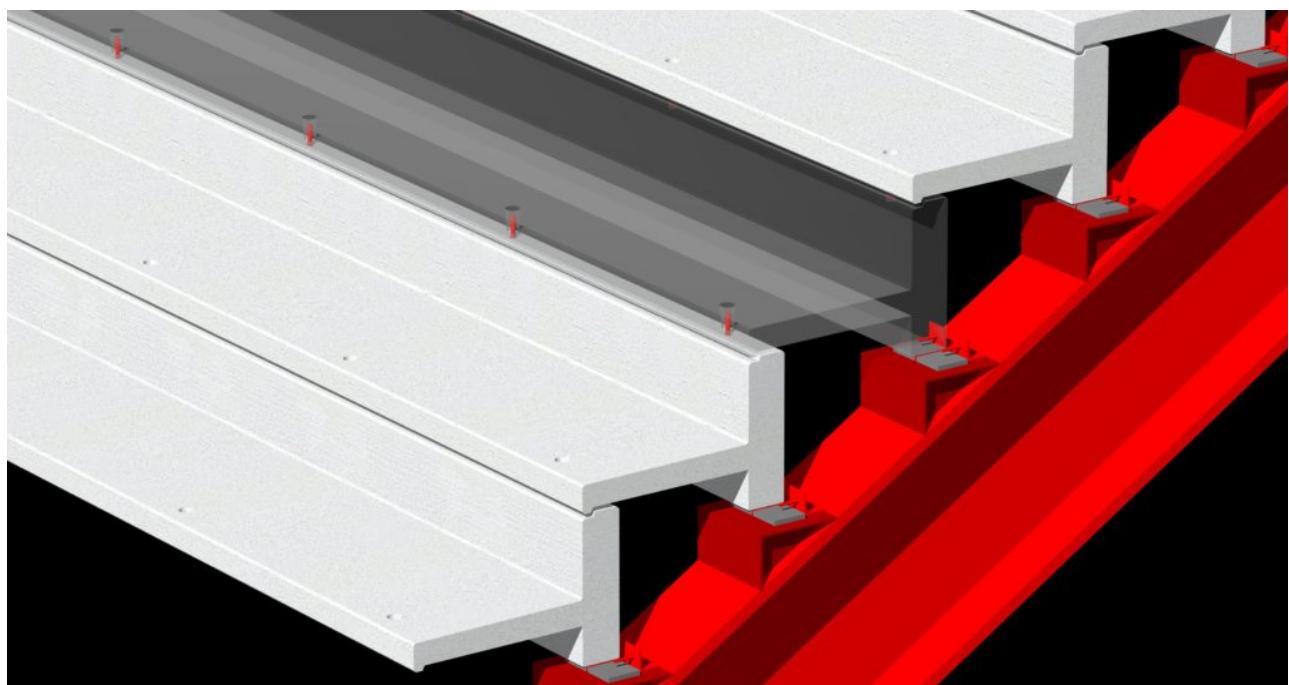
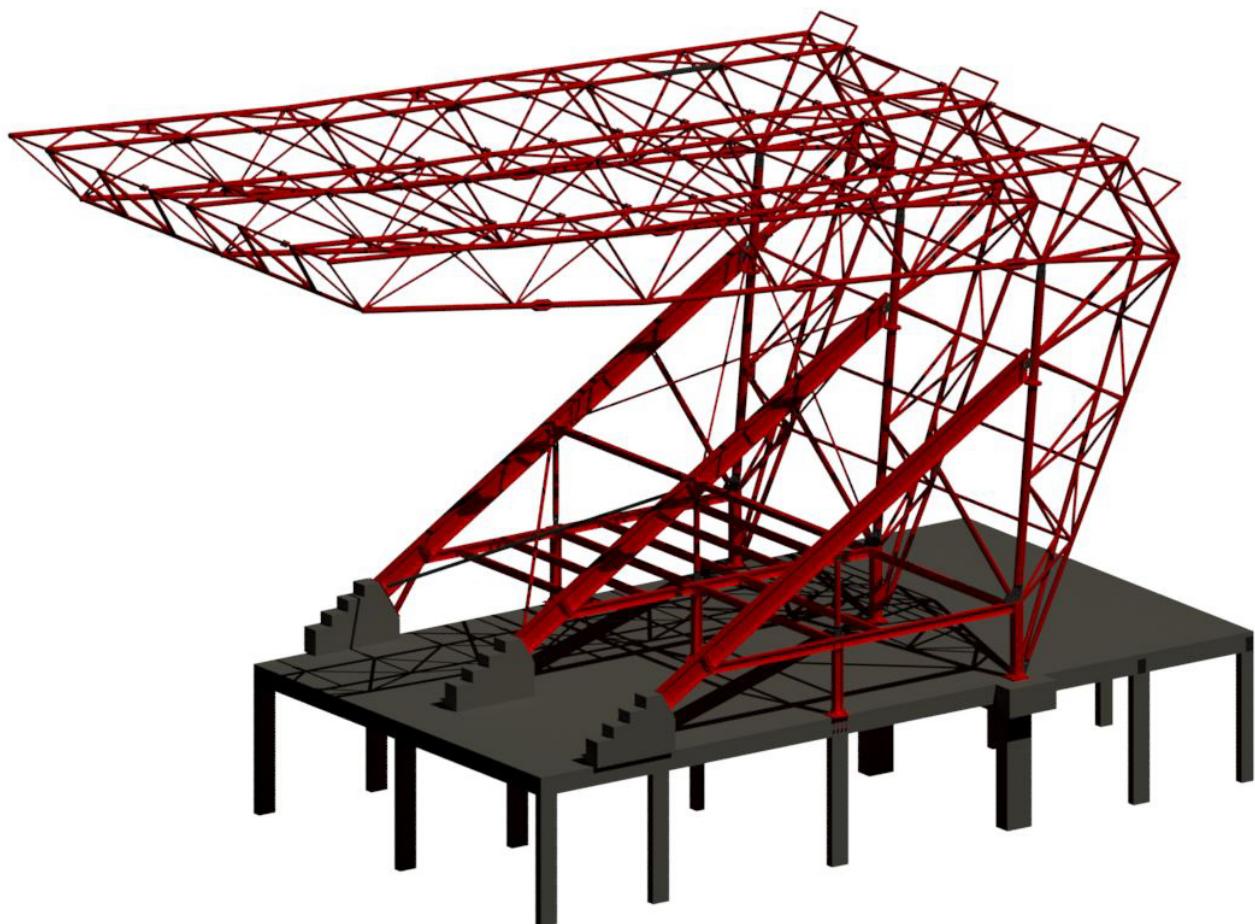
Services: Detailed design, Structural Engineering, Foundations design, Mechanical, Electrical and Plumbing design, Project Management, Construction planning, Consulting and on-site technical support

TEAM

Paulo Pimenta

LOCATION

Nasiriyah, Iraq



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