Riazor Stadium rehabilitation project

La Coruña, Spain / 2014-In progress

Structural type	three dimensional steel structure
Characteristics	R.C.D. La Coruña Stadium structure and roof rehabilitation project
Owner	Real Club Deportivo de La Coruña
Client	Dragados
Constructor	DRAGADOS
Scope	construction support
Architect	Estudio Lamela & Hok

During the bidding process for the Project and Execution of the reform of the roof of the Riazor Stadium (A Coruña), FHECOR Ingenieros and Lamela Architects, collaborate with DRAGADOS to present a proposal.

The roof of Riazor Stadium consists of four independent structures. These structures consist of light steel structures tubes and spherical joints. Lateral grandstands roofs of Tribune and Preference were built for the 1982 World Cup. These roofs are supported by masts to the concrete frames. Its last repair was executed in September 1992. The current reform project proposes its replacement due to its poor state of conservation and the difficulties associated with its possible repair. The others roof (Pavilion and Marathon) were completed in 1992. The current reform project proposes its repair by replacing some damaged bars and repainting the entire steel elements.

Architectural solution for the new roof proposes the elimination of the masts to achieve a uniformity of the whole roof. The skin of the roof is extended as well towards the façades. Roofs go from being wind-permeable structures to closed structures. The new structural solution for the roofs consists of steel cantilever trusses embedded in the concrete frames.

The works developed by Fhecor Ingenieros Consultores have consisted in the structural evaluation of the project solutions as well as the analysis of the construction process. The steel structure has been checked as well as the verification of the need for reinforcements in the concrete frames. Construction process analysis has determined the sequence of activities as well as the cranes capacity in each situation.

An alternative solution is proposed in the grandstand Preference roof, proposing the cantilever trusses only in the frames in which at present there are masts in order to respect the same current support scheme and avoid reinforcement in the concrete frames.

Finally, the modifications to architectural solutions proposed by Lamela Architects has been analysed.

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