



Arch Bridge over the Júcar river

Alzira, Valencia, Spain / 1998

Structural type
Characteristics
Owner
Client
Constructor
Scope

arch of 57.64m span and intermediate composite deck
main span: 57,64m
Generalitat Valenciana
Carrión, Plodfer y Schwart Hautmont
Carrión, Plodfer y Schwart Hautmont
detailed design



The bridge over the River Júcar comprises a double arch with an intermediate composite deck which is highly skewed.

The arches above the deck are made of steel maintaining a constant area, despite their variable widths at different points: each arch is less wide but deeper at springs and wider but less deep at key, in order to increase lateral stability against buckling. The span of the arch at the intersection with the deck is 87,00 m. As the bridge foundations are supported on piles, the arch is completed with a triangular steel cell which contributes to compensating the horizontal component of the arch reaction.

Once the concrete infrastructure was built, the steel deck was placed and the upper arch on top of it. The hangers were stressed and, finally, the concrete of the deck was cast.



C/ Barquillo 23, 2º | 28004 Madrid | España
T. (+34) 917 014 460 | F. (+34) 915 327 864
www.fhecor.com | fhecor@fhecor.es