

La Vicaria Arch over La Fuensanta reservoir

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Summary

La Vicaria Arch is a through arch bridge placed over La Fuensanta Reservoir on the River Segura, Albacete (Spain). The total length of the viaduct is 260 m, with 2 arches that spans 168 m. Each arch is inclined 10° inwards at both sides of the deck. The arch sections are quasi-rectangular formed by folded steel plates filled with self-compacting concrete. The deck section comprises two longitudinal steel beams connected with a concrete slab. The construction system involves assembling a 120 m tied arch on the ground and after that, lifting it 40 m with hydraulic jacks to connect it to the rest of the structure, built as a cantilever erection. This article describes the most relevant facts of the bridge and peculiarities related to the construction process.

Keywords: Arch; self-compacting concrete; composite section; anchoring; elevation; tied bridge; hangers; cantilever, bowstring, lifting.



Fig. 1 *The Vicaria Arch. (13-06-07).*