

Railway viaduct upon the Sado

Upon the river Sado (Portugal)



Mission conducted in partnership with the engineering office GRID (Lisbon). Preliminary project, design and execution studies of the main bridges by bureau greisch. General survey, study of the approach viaducts and the foundations by GRID.

Owner
REFER E.P. (Portuguese
Railways)

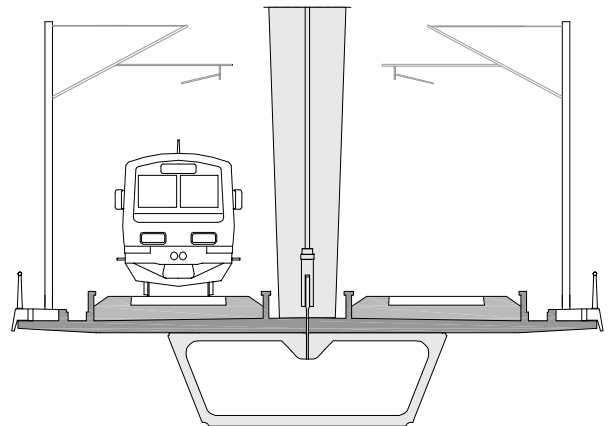
Architect
Bureau greisch (for the three
bowstrings)

Cost of the works
€ 66.75 M. excl. vat

Studies
2003 - 2010

Execution
2008 - 2010

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The construction of the new rail connection Lisbon-Algarde requires the crossing of the Sado River, which flows into the Atlantic south of the capital.

The topographic characteristics of the alluvial valley require the construction of two approach viaducts 1115 m and 1140 m long (composite two girder deck essentially with continuous spans of 45 m) surrounding the main crossing of 480 m that crosses the river.

The latter consists of three continuous spans of 160 m. In each

of the spans, the monobox composite deck carrying two tracks is supported by a central arch and steel vertical hangers, giving it a bowstring-like behavior.

The particularity of this structure lies in the hexagonal cross section of the arcs and the structural continuity of the deck between the three bridges.

Located in an area of high seismicity, it is provided with longitudinal transmitters at its supports.