



Alta Velocidad viaducts. Tolosa-Hernalde section

Tolosa, Spain / 2011

Owner
Client
Constructor
Scope

ETS
ISOLUX - CORSAN
isolux corsán
detailed design and construction support



In the new basque railway network section Tolosa - Hernalde, FHECOR Ingenieros Consultores has designed four new viaducts: Salubita, Oaska, San Esteban and Luzuriaga.

The viaducts consist of a post-tensioned continuous box section beam to which the piers are rigidly connected. The deck is 3.94m depth and 14.0m width.

The main characteristics are listed bellow.

Salubita viaduct

- o Total length: 141.0 m, spans 34.0 - 57.0 - 50.6 m
- o Pier height: 25.0 - 30.0 m
- o Longitudinal STU devices are placed in both abutments in order to transmit horizontal loads to foundations without fixing point.

Oaska viaduct

- o Total length: 96.7m, spans 48.35 + 48.35m
- o Pier height: 21 m
- o Longitudinal STU devices are placed in both abutments in order to transmit horizontal loads to foundations without fixing point.

San Esteban viaduct

- o Total length: 230.0 m, spans 40 + 3x50 + 40 m
- o Pier height: 25-30 m
- o Due to the length of the viaduct, pier 4 and both abutments are POT bearings and abutment 1 is fixed in order to transmit horizontal loads to foundations. The rest of the piers (1, 2 and 3), following the general design, are rigidly connected to the box girder.

Luzuriaga viaduct

- o Total length: 98.0m, spans 46,0+ 52,0 m
- o Pier height: 21.0 m
- o Longitudinal STU devices are placed in both abutments in order to transmit horizontal loads to foundations without fixing point.



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