Chilina Bridge (Peru)

Project description

The Chilina Bridge in the Peruvian city of Arequipa, opening 2014, is a segmental continuous pre-stressed concrete viaduct. With an overall length of 562 m, it is the longest urban bridge in the country, with spans of up to 157 m. Its two 11.3 m-wide decks are box girders with variable depths. These were constructed by the balanced cantilever method with 5.1 m-long insitu segments built using form travellers. It is in a highly seismic area, requiring large seismic movements to be allowed for in the design.

mageba scope

The bridge is equipped with 4 TENSA®MODULAR expansion joints - two at each end, one per structure. These are of type LR7 (with 7 individual movement gaps), allowing service movements of up to 560 mm (80 mm per gap). The joints feature Fuse-Box seismic protection, designed to ensure that the expansion joint will break free of the deck in a controlled manner during an earthquake, avoiding serious damage to the deck or the joint itself. This will enable the bridge to be used in the immediate aftermath of an earthquake, when it might be needed most for emergency purposes.

Highlights & facts

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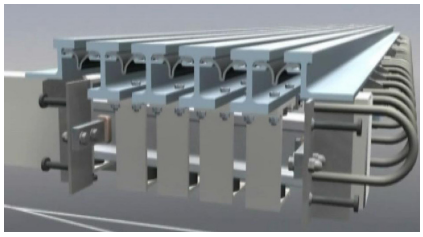
Type:	TENSA®MODULAR expansion joints (LR7)
Features:	Fuse-Box (seismic)
Installation:	2014

Structure:

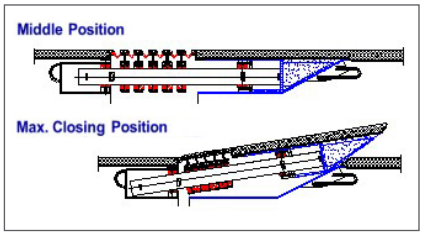
City:	Arequipa
Country:	Peru
Completed:	2014
Type:	Concrete viaduct
Length:	562 m
Contractor:	Consorcio Constructor Puente Chilina

Arequipa is Peru's second most populous city, with a population 10 % that of the capital, Lima

Sectional view of a TENSA®MODULAR expansion joint with 5 gaps (Type LR5)



The joints feature Fuse-Boxes, enabling them to break free from the deck during an earthquake



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