Ventabren TGV Railway Viaduct (France)

Project description

The Ventabren railway viaduct, built between 1996 and 1998, forms part of the TGV Méditerranée high speed rail connection between Paris and France's Mediterranean coast at Marseilles. The bridge has a length of 1730 m, enabling it to cross a canal and a number of roads including the A8 motorway.

The main motorway crossing has a haunched girder deck with a span of 100 m, which was constructed parallel to the road and then rotated into position about a vertical axis. The remainder of the viaduct, with a prestressed concrete box girder deck, was launched incrementally.

mageba scope

mageba supplied eight RESTON®SA hydraulic dampers, each with a force capacity of 3,000 kN and allowing movements of up to 650 mm, to control the longitudinal movements of the viaduct's deck. These are velocity-dependent devices, consisting primarily of a piston in a fluid-filled cylinder. They allow free movements of a structure during service conditions, but control displacements and dissipate energy during sudden movements caused, for example, by earthquakes or exceptional traffic forces. They thus reduce the impact of the forces on the structure, enabling its design to be optimised.

Highlights & facts

mageba products:

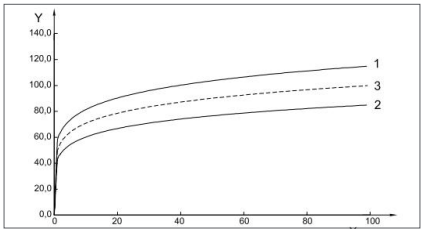
Type:	RESTON®SA hydraulic dampers
Installation:	1998

Structure:

City:	Ventabren
Country:	France
Type:	Box girder bridge Haunched girder bridge
Completed:	1998
Length:	1730m
Main span:	100m

The viaduct is on the TGV line from Paris to Marseilles, where it passes the city of Ventabren

Force-Velocity diagram of a typical RESTON®SA hydraulic damper



An installed RESTON®SA hydraulic damper

mageba
Switzerland www.mageba.ch

mageba sa - Solistrasse 68 - 8180 Bülach - Switzerland - T +41 44 872 40 50 - info@mageba.ch