

TGV Viaduc de la Courbe (France)



Project description

The LGV Bretagne-Pays de la Loire is a high-speed rail line being built in north-western France. Construction, at an estimated cost of €3.4 billion, is scheduled to be completed in late 2016. The line will be serviced by TGV trains operated by SNCF, the French national railway company.

The Viaduc de la Courbe is an eight-span viaduct on the line near the city of Le Mans. It has a total length of 374 m, including six spans of 50 m and two end spans of 37 m each. Its composite deck has a width of 12.5 m, and is at a maximum height of 21 m above the ground.

mageba scope

18 RESTON®SPHERICAL bearings support the viaduct's deck, designed to resist downward forces of up to 23,840 kN while accommodating longitudinal movements of up to +/- 215 mm. The use of mageba's specially developed sliding material, ROBO®SLIDE, instead of PTFE in fabricating the bearings maximises their strength and durability.

The bearings at both abutments are additionally designed to resist occasional uplift forces of 450 kN which may arise during de-ballasting operations. They do this by means of external clamps, which are also equipped with ROBO®SLIDE sliding interfaces to enable the bearings to accommodate sliding movements even under uplift conditions.

Highlights & facts

mageba products:

Product: RESTON®SPHERICAL bearings
Features: Uplift protection, ROBO®SLIDE material
Installation: 2014

Structure:

Country: France
Completed: 2015
Type: High-speed rail viaduct
Length: 374 m
Contractor: Eiffage
Architects: RFF

The viaduct is being constructed on the route of the new TGV line in north-western France.



Assembly of a RESTON®SPHERICAL bearing, showing its upper greased ROBO®SLIDE disc.



Cross-section of a RESTON®SPHERICAL bearing with external uplift clamps.

