

Bridge over the Boiron in Saint-Prex (CH)



Project description

The Bridge over the Boiron River, owned by the Swiss Highway Authority FEDRO-ASTRA, is a highway bridge located between Lausanne and Geneva.

The structure, originally built in 1964, has a curved shape, which means that the thermal expansion of the structure creates a transverse movement, that can damage the installed expansion joint equipped with sinus plates.

mageba scope

When the expansion joint was originally installed, guided bearings were already in use to absorb the horizontal tension caused by the movement of the structure. However, these bearings were removed subsequently, which made the situation critical for the expansion joint and therefore also for traffic safety. The sinus plates on the surface of the joint came into contact with each other, transferring enormous forces to the structure itself, and damaged one side of the installed joint.

mageba proposed the use of two vertically installed RESTON®POT LIFT-CONTROL TA3 injectable pot bearings on each abutment to ensure a permanent horizontal guidance. After installation a special resin-based compound was injected in each bearing, which enables a progressive and controlled resetting of the products. During the injection process, the contact pressure was permanently controlled using a special sensor and mageba's ROBO®CONTROL portable monitoring system. After the successful installation of the bearings, our team of experts refurbished the damaged expansion joint.

Highlights & facts

mageba products:

Type: RESTON®POT
LIFT-CONTROL bearings
ROBO®CONTROL
portable monitoring
system

Feature: The bearings feature
pressure sensors and
have lifting capacity

Installation: 2018

Structure:

Country: Switzerland
City: St-Prex
Type: Highway concrete bridge
Length: 200 m
Owner: Swiss Highway Authority
(FEDRO-ASTRA)
Built: 1964
Contractor: Kung et Associes SA

The bridge is located between Lausanne and Geneva, near the town of Saint-Prex



Injection of an installed RESTON®POT LIFT-CONTROL bearing with a resin-based compound



Refurbished expansion joint under traffic

