Hammermühle Viaduct (Switzerland)

Project description

The N01 national road between Effretikon and Ohringen, connecting the two cities of Winterthur and Zurich, is one of the busiest routes in the Zurich urban area.

The Hammermühle Viaduct situated on this section of the N01 was built in 1970, and carries six lanes.

Due to the poor condition of its old bearings, the bridge required new ones.

The biggest challenge with this project was not the product itself, but the engineering challenge of lifting the viaduct several times to replace the bearings. This process had to be carried out synchronously and under constant supervision (monitoring).

In addition, an extremely short time window had to be observed in which the construction work had to take place.

mageba scope

In order to replace the bearings, the bridge deck was lifted a couple of millimeters by using hydaulik jacks, and the old bearings were extracted one by one. The new RESTON®POT bearings (8 pieces in total) were then pushed in and installed on newly grouted pillars.

As the bridge could not be completely closed to traffic at any time, work took place at night with two out of six lanes remaining open. Due to the very limited time window, the entire process was divided into four stages.

In addition to these challenges, our staff had to work at a height of 35 m on very exposed locations, where space and thus access to the bearings was fairly limited.

During the works the MM1018 polymer system was used for gap compensation.

Highlights & facts

mageba products:

Type:	RESTON®POT bearings
Feature:	Gap compensation by using the MM1018 polymer system
Installation:	2023

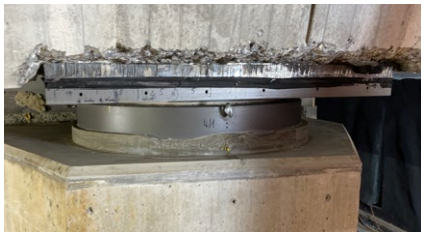
Structure:

Country:	Switzerland
City:	Between Effretikon and Ohringen
Type:	Box girder bridge
Completed:	2023
Main span:	41 and 65 m
Length:	381 m
Owner:	Bundesamt für Strassen ASTRA
Contractor:	Marti AG, Bauunternehmung
Engineer:	dsp Ingenieure + Planer AG

The project is situated on the N01 national road near Zurich

Lifting the viaduct with hydraulic jacks to make room for the bearing replacement

A newly installed RESTON®POT bearing



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