



Strengthening of a bridge in Riehen (Basel, CH)

Reinforcement with re-bar embedded in sprayed mortar

Location: Riehen, Switzerland

Year: 2020

Building owner: Tiefbauamt Basel-Stadt

Engineering consultancy: Gruner AG

Contractors: Hydrojet, re-fer AG

Description

A reinforced concrete bridge was renovated as part of various renovation works at the 'Mühleteich' in Riehen. As the intermediate support on the underside of the slab had to be removed, the static system changed and thus required a flexural strengthening at bottom side of the slab. For this purpose, the concrete surface was hydromechanically roughened in a first step. After the re-bars (400 m) had been installed, they were anchored to the substructure at both ends over a length of >50 cm using a layer of sprayed mortar (Sika MonoTop 422 PCC). After a sufficient curing time, the bars were activated by applying heat with a gas torch and hence pre-stressed. Finally, the free length between the anchorages was also covered with sprayed mortar to create a reinforcement system with bond. The system allowed to generate prestressing easily and reinforcing the structure efficiently without the need for extensive equipment.

re-fer Product

re-bar

