

Press Release

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Looking towards the future: Rehabilitation of Itztal bridge railway overpass successfully completed

- Spesa and Schachtbau Nordhausen repair a railway overpass near Roedental.
- Concrete damages caused by chemical attack reactions in the pier caps
- Roughly 2,000 m of fractures tamped and grouted
- Pier caps prepared and coated over an area of 3,500 m²

Roedental, Germany – It is more than 20 years old, has a total of 14 pier caps and bases, and is made up of a 868 m steel composite structure: the Itztal bridge railway overpass. The railway bridge with a height of roughly 30 m is part of the high-speed railway line through the Thuringian Forest and runs between the towns of Roedental and Doerfler-Esbach in Upper Franconia. The problem? Fractures in the pier caps caused by incipient chemical attack reactions in the concrete, which leads to efflorescence and fractures in the concrete support structures of the piers as a result of moisture. To safeguard the stability of the Itztal bridge on the long term and prevent the ingress of water, SPESA Spezialbau und Sanierung GmbH was tasked along with the steel construction experts from SCHACHTBAU NORDHAUSEN GmbH to carry out extensive concrete rehabilitation and steel reinforcement measures. After a construction period of roughly one year, the order was successfully concluded in June 2024, a subcontracted service on behalf of DB Bahnbau Gruppe GmbH as main contractor for DB InfraGO AG.

Tamping, grouting, coating

The focus at the start of work was on the pier caps. First, the subsoil was prepared extensively over an area of 3,500 m². This was followed by tamping and grouting roughly 2,000 m of existing fractures. The final step was coating the entire processed surface of 3,500 m². The specialists on the injection platforms also installed 500 m² of sloping PCC with anchored stainless steel mats which were then sealed with a crack-bridging, walk-over surface protection system. In addition, 1,800 m of grooves were constructed for sensor technology and extensive measures were taken to protect the pier bases against penetrating moisture as well.

Perfectly coordinated

“The interplay of all areas – from scaffolding construction to steel structures all the way to measuring technology – was extremely important for this project,” remarks Lars Prokosch, Project Manager for SPESA Spezialbau und Sanierung GmbH. “After all, the Itztal bridge railway overpass is an 886 m long railway bridge.” What’s more, the principal work was carried out during active operation. “The only shutdown was a period of 80 hours for the work on the bridge coping,” continues Lars Prokosch. “But our team was able to successfully manage even this challenge working around the clock.” As a result, the work

was executed on time and to the owner's satisfaction. The Itztal bridge railway overpass is now optimally equipped against external influences and ready for a safe and stable future.

Images: pressebild-press-image-sanierung-rehabilitation-itztalbruecke-spesa-bauer-resources...



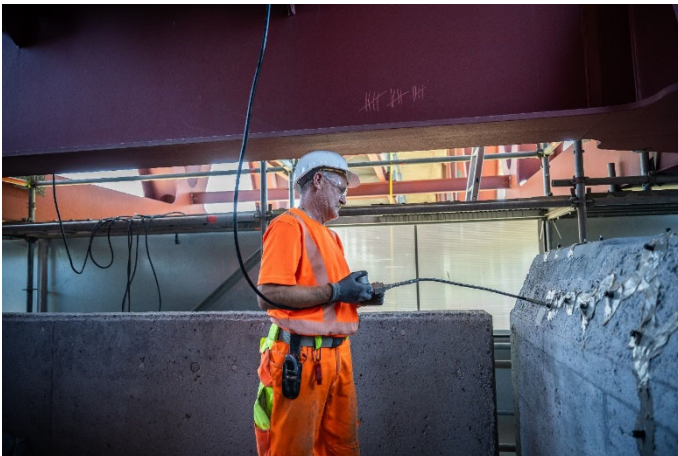
(1) The rehabilitation of 14 bridge piers and caps for the Itztal bridge railway overpass was successfully completed in June 2024.



(2) Project Manager Lars Prokosch monitors construction progress.



(3) Work on the pier caps was executed using suspended scaffolding.



(4) In total, 2,000 m of fractures were tamped, grouted and then coated.



(5) To protect against penetrating moisture, the pier bases were also treated extensively.



(6) The freshly renovated pier caps of the Itztal bridge railway overpass

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