RAILWAY LINE KUFSTEIN - BRENNER, RENEWAL OF THE UNDERPASS TERFENS

Client: Austrian Railways infrastructure AG
Development Period: 2019

THE PROJECT

In Terfens at the *Inn* valley, a road underpass has been renewed beside the existing crossing at km 54.464 of the Kufstein - Brenner railway line.
The object is designed as a frame structure with an inner width of 6.3 m, an inner height of 4.7 m and a length of 11.5 m. Due to the high ground water level, watertight trough structures are joined at both sides of the underpass with lengths of 24 m and 23 m.

OUR FUNCTION

BGG Consult has been commissioned for this project with the expertise in the field of geotechnics since the phase of the tender project. For this, core drillings, dynamic probings, and exploratory pits have been planned, supervised and evaluated initially. Based on the results, a geotechnical expert's report was prepared. Subsequently, the tender planning and the construction has been attended to in the respective field.

Bottom sealing by the method of jet grouting:
The bottom of the underpass is situated in the highly permeable gravel fill of the *Inn* valley and integrates significantly below the ground water level. Therefore, a watertight construction pit was indispensable. Since the impermeable stratum could not be reached by means of sheet piles due to the high thickness of the gravel layer, a bottom sealing was implemented with the method of jet grouting below the sheet pile box. The level of the grouting has been chosen in a way that the soil load above the grouted body served as a buoyancy control. The project could be realized according to plan without any problems, not least because of a consistent geotechnical assistance.

Preparation of the bottom sealing by method of jet-grouting