

AMSTETTEN - TARVIS RAILWAY LINE (SCHOBERPASS LINE), CONTRACT SECTION 12

Client: Austrian Railways

Development Period: 1995 to 2004

THE PROJECT

The two-track extension of the Schoberpass Line, included the construction of the 4 km long Unterwald-Kalwang section (contract section 12). The work also included the straightening of the route as well as the construction of a tunnel (Unterwalder Tunnel).

The new line deviates up to 250 m from the existing line, which required (due to the topographic situation) the construction of dams with heights of up to 17 m, and excavations with depths of up to 20 m. The 1 km long tunnel was excavated using the mining method and has a maximum overburden of 100 m. Besides the necessary earth works, new bridges and retaining structures had to be built.

OUR FUNCTION

In this project, BGG Consult was responsible for the geotechnical and hydrogeological consulting during all of the planning and construction phases.

To this purpose, subsoil exploration works were planned, tendered for, coordinated and evaluated. Close cooperation with the commissioned geologist was necessary, and a combined expert's report of the geology, geotechnics and hydrogeology was compiled.

During the construction phase, geotechnical and hydrogeological consulting was carried out on the site. Furthermore, geodetic and inclinometer measuring points were supervised.

Unterwalder Tunnel, western portal:

The western portal of the Unterwalder Tunnel is situated in a geologically sensitive zone. The geologist identified active creeping occurrences. Therefore, special attention had to be given to secure the excavations leading to the tunnel.

In order to avoid instabilities of the slope, securing structures, comprised of shotcrete and pre-stressed anchors, were implemented. The stability of the slopes was monitored by measuring the anchor loads, as well as the geodetic and inclinometer measurements of displacements.

Due to the survey of the subsoil behaviour and the interpretation thereof, the slopes were secured according to the required safety levels and in a cost-effective way.

*Unterwalder Tunnel,
western portal;
inset wall*

