



Tunnel Oberau (D) Sheet Waterproofing

Country	Germany
Type	Motorway Tunnel
Client	Road Administration Region Bayern South
Main Contractor	Marti Tunnel AG/ Marti GmbH/ TuCon a.s.
Execution of the work	Renesco GmbH
Designer	PSP Consulting Engineers, ILF Beratende Ingenieure
Construction Period	2018 – 2020

Project Description

The tunnel project, close to Garmisch-Partenkirchen, which aims to divert the existing road that crosses the town of Oberau. The project comprises the new construction of a twin tube road tunnel using mostly conventional excavation methods (drill & blast, in hard rock, 80% and excavator advance in loose material, 20%).

The excavation was performed with horizontal parallel surface injections in order to prevent surface settlements due to low overburden. The ground water control was part of the scope of works. The main parts of the project consist of:

- 2'750 and 2'830 m long (95 m²) twin tube road tunnel
- Cross connections every 500 m (14 to 36 m²)
- Shallow shafts for elevation-injections
- Cut & Cover section

Scope of Service

Supply & Install of the waterproofing system acc. to ZTV-ING (German standard) and all kinds of grouting/ injection works.

- FPO/TPO, 3mm in areas with water under pressure (360°) seal
- FPO/TPO water barriers, 600/6/30
- FPO/ TPO Protection Sheet, 3mm, invert
- FPO/TPO, 2mm in drained areas, umbrella seal
- Polypropylene (PP) Protection geotextile, 950g/sqm
- Installation of sealing ring(s) between drained and undrained section
- Waterproofing of the cut & cover structure with a 3mm FPO/TPO sheet waterproofing membrane
- Loose-Flange construction/ Clamping
- Welding of elastomer waterstops
- Compensation Grouting
- Sealing ring/ curtain grouting/ injection works (Dammring-Injektion)
- Concrete repair works, Crack Injection



1. Waterproofing at the crown
2. Reinforcement Work
3. Cut & Cover structure