

ETCS Gotthard Base Tunnel, Tender Train Control and Signalling System

Concept, design and specification (incl. use cases and hazard analysis) of the new train control and signalling system for the Gotthard line on behalf of AlpTransit Gotthard AG.

The contract included the tender specification- and offer evaluation phase as well as options for the realisation phase and additional works like the study of alternative routes in the northern part of the tunnel.

The project is carried out by a consortium under the lead of Emch+Berger AG Bern. The system has been specified in a complex environment with many interfaces to other systems where the use of new technologies, open interface requirements, modularity, operational safety, interoperability, cost budgets and adherence to international and national standards have been set conditions to be met.

The specifications included:

- Central Control System
- Train control (ETCS level 2)
- Interlockings
- System Integration

**Client**

AlpTransit Gotthard AG, Lucerne

Period: 2004 - 2008

Delivered services

- Signal plan
- System layouts
- Submission documents
- Offer evaluation
- Assistance during procurement
- Document management

Specifications

- Two separated running tunnels: 57 km
- Train speed: 80-250 km/h
- Headway: 3 min
- Train control system: ETCS level 2
- RBC with GSM-R interface: 3
- Interlockings: 4
- Balises: approx. 370
- Central Control System: 1