

Traction Power Control System NEAT Lötschberg Base Tunnel

Client

BLS Alptransit AG (BLS AT)

Consultant

IUB Engineering AG

Construction period

2000–2007

Construction costs

CHF 5.5 million

Scope of services

Design as well as supervision of implementation and commissioning of the traction power control system of the Lötschberg Base Tunnel incl.

- Detailed concept and tendering
- Evaluation of bids
- Refurbishment of transformer station "South"
- Review of performance specifications
- Supervision of execution of works
- Supervision of integration of control systems and units
- Organisation and support during commissioning and start-up

Description

The traction power control system was part of the lot for high voltage with respective primary installations complete with protection systems.

Main technical data

The traction power control system for the tunnel was developed as a redundant system in Frutigen and Raron and also comprises the control units (interface IEC 60870-5-103):

- Traction power substation Mitholz (132 kV / 16.7 Hz) incl. GIS 132 kV and 33 MVA transformer
- On-site facilities for the mobile substation
- Ten feed-in points and switchgear (15 kV / 16.7 Hz) as well as controlled protection routes
- 21 transformer stations (16 kV / 50 Hz), of which 5 are with integrated connection to the local power utility
- Network coupling system incl. 5 MVA couplig transformer for coupling to the 16 kV / 50 Hz networks north and south

The traction power control system is connected to the Swiss traction power network control system via an interface at Mitholz Substation.

