SANIERUNG AXENTUNNELS SEESEITIG
BRUNNEN - FLÜELEN (CH)

EMPLOYER
Schweizerische Bundesbahn SBB, CH-6002 Lucerne
Cantons Uri and Schwyz
(tunnel protection – bridge over the N4)

DESIGNER
IG SINERGIA PLUS consisting of:
Amberg Engineering AG, CH-8105 Regensdorf
F. Preisig AG, CH-8050 Zurich
Ingenieurbureau Heierli AG, CH-8033 Zurich

TIME OF COMPLETION
November 2016 – December 2019

CONTRACT SUM
CHF 53.5 Mio.

EXECUTION OF THE WORK
ARGE Marti Rhomberg Axen

CONSORTIUM PARTNERS
Marti Tunnel AG, CH-3302 Moosseedorf
Marti Bauunternehmung AG, CH-6005 Lucerne
Rhomberg Bahntechnik GmbH, CH-8048 Zürich

LEAD COMPANY AND TECHNICAL LEAD
Marti Tunnel AG, CH-3302 Moosseedorf

COMMERCIAL LEAD
Marti Bauunternehmung AG, CH-6002 Lucerne
SANIERUNG AXENTUNNELS SEESEITIG
BRUNNEN - FLÜELEN (CH)

SCOPE OF THE WORKS
The entire project extends over 11.6 km and comprises:
- Number of tunnels 9 pcs
- Total length 5.4 km
- Year of construction 1882
- Emergency renovation 2003 / 2004

WORK DESCRIPTION
Tunnel installations:
- Tunnel Hochfluh
- Tunnel Franziskus
- Tunnel Oelberg
- Tunnel Stutzeck
- Tunnel Tellsplatten
- Tunnel Axenberg
- Tunnel Sulzegg
- New and old Gruonbach gallery / Self-rescue facility
- Protection tunnel and road overpass on the N4

Tunnels renovation works:
- Installation sites on steel platforms above tracks
- Recovery of the abutments
- Vault and sole renovation
- New drainage system
- Sole sinking
- Adjustments of niches
- Upgrade of existing tracks (incl. debris removal)
- Dismantling and removal of existing cable ducts
- Niche extensions for technical facilities
- Foundations for FL masts and tunnel telecommunication cabins outside
- Renovation and adaptation of retaining walls, culverts and bridges
- New cable ducts in all tunnels and railroad tracks outside
- Casted rail track and ballast upper structure in all tunnels and on the outer sections
- Renovation of the tracks between Brunnen and Gruonbach
- Installation of signage for self-rescue and main inspection area marking
- Dismantling and removal of technical facilities, such as:
  - Cables
  - Upper structure (rails, fasteners and thresholds)