TUNNEL FEUERFELSEN / RENNBERG
COBURG OST (DE)

CLIENT
Deutsche Bahn AG, DE-99001 Erfurt

ENGINEER
DB ProjektBau GmbH, DE-04003 Leipzig

TIME OF COMPLETION
2010 - 2013

CONTRACT SUM
CHF 102 Mio. (€ 82 Mio.)

EXECUTION OF THE WORK
ARGE Tunnel Feuerfelsen Rennberg

CONSORTIUM PARTNERS
Marti Tunnel AG, CH-3302 Moosseedorf
Marti GmbH, DE-70567 Stuttgart
Johann Bunte Bauunternehmung GmbH & Co.KG, DE-26871 Papenburg

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

COMMERCIAL LEAD
Johann Bunte Bauunternehmung GmbH & Co.KG, DE-26871 Papenburg
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SCOPE OF THE WORKS
Two-track railway tunnel. VDE 8.1 new railway section
Ebensfeld – Erfurt, BA 3121, VP Coburg Ost, NBS Bau-
km 19,1+30 – 24,8+95

ACTIVITIES
The road project Coburg East is part of the road traffic
master plan Deutsche Einheit Nr. 8.1, new highway
The contract embraces a 5.8 km long stretch including
the tunnel Feuerfelsen 1’003 m, the tunnel Rennberg
1’032 m, five bridges, the roadwork and earthwork of
2.2 mill. cubic meter.

Execution and schedule :
The tunnels are constructed double lined, being the
external lining of shotcrete and the inner one of con-
crete. The tunnel section has 160 m² and both tunnels
are excavated simultaneously. The excavation is per-
formed applying the conventional NATM. Works started
in August 2010 with the excavation of the pre-cut of the
southern portal of the tunnel Feuerfelsen. The tunnelling
work started in January 2011. For the completion
of both tunnels of 21 months are scheduled

Length: 1 x 1’003 m
1 x 1’032 m
- Excavation volume: 320’000 m³
- Shotcrete/concrete volume: ca. 170’000 m³
- Reinforcement steel inner lining: ca. 8’000 t
- Construction method: NATM (D&B with top heading, bench and invert)
- Pull length: max. 2.2 m
- Diameter of the tube: 12 m
- Minimalum overburden: 10 m
- Maximalum overburden: 25 m
- Escape gallery L = 150 m and escape shaft
- Planned speed-limit: 300 km/h

GEOLOGY
Both tunnels Feuerfelsen and Rennberg are driven on
their whole length through formations of coloured sand-
stone.

The tunnels have an overburden of 10 to 25 meters.
Due to ground water the construction is shielded with a
KDB insulation.