



# **TUNNEL BIBRA**

## **ERFURT (DE)**

### **EMPLOYER**

DB Netz AG, DE-60486 Frankfurt am Main

### **DESIGNER**

DB ProjektBau GmbH, DE-04084 Leipzig

### **CONSTRUCTION PERIOD**

12.2007 – 05.2012

### **CONTRACT SUM**

CHF 240 Mio. (€ 208 Mio.)

### **JOINT VENTURE COMPANY**

ARGE Bibratunnel

### **JOINT VENTURE PARTNERS**

Marti Tunnel AG, CH-3302 Moosseedorf  
Marti GmbH Österreich, AT-8045 Graz  
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

# TUNNEL BIBRA

## ERFURT (DE)

### SCOPE OF THE WORKS

VDE 8.2 NBS Erfurt-Leipzig / Halle  
PFA 2.2 Bibratunnel

### PROJECT DESCRIPTION

The Bibra tunnel is part of the transport construction projects, Deutsche Einheit Nr. 8, the expansion- new road Nuremberg-Erfurt-Leipzig / Halle-Berlin. The Bibra tunnel consists of two single-rail track tunnels planned for a maximum speed of 300 km/h.

The main tunnel elements are described below:

- 2 x 6'346 m (86 m<sup>2</sup>) twin tube rail tunnel
- Tunnel tube diameter: 9.6 m
- Distance between track axes: 25 m
- 13 cross connections (every 500 m)
- 2 ventilation shafts: 30 m each

#### Work Description:

Underground excavation, rock support and grouting work

- Excavation methods: Drill and blast with top heading and bench with max. pull length of 1.8 m
- Excavated length and volume: 2 x 6'346 m, approx. 1'100'000 m<sup>3</sup>
- Standard rock support: shotcrete and systematic rock bolts
- Additional rock support: lattice girders
- Shaft excavation: 2 x 30 m, D=2.5 m using the Alimak method

#### Surface- and groundwork

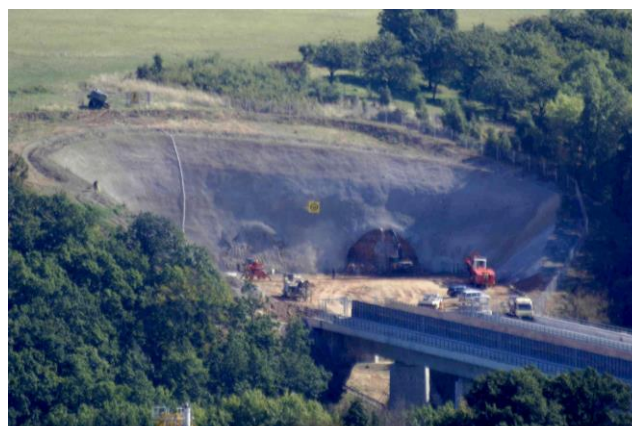
- Pre-cut excavations and slope protection
- Area of site installation & facilities: 8 ha
- Roadworks of 10 km
- Fresh water and drainage system
- Management of excavated material: 1.4 Mill. m<sup>3</sup>

#### Concrete work

- Reinforced tunnel concrete lining: 17'000 t of steel
- Portals: up to 115 m long Sonic-boom structures
- Concrete banquetts
- Shaft inner lining with WUBK designed for a water column of over 20 m
- Total concrete and shotcrete volume: approx. 450'000 m<sup>3</sup>

### GEOLOGY

The Bibra tunnel runs along its entire length in rock formations of medium variegated sandstone. The tunnel has an overburden of about 15 to 50 meters.



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**Marti Tunnel AG**

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