JOB REPORT

A Minimal Effort for Major Progress: Tunnel Lining with Mobile Scaffold

Work on Brandberg Tunnel lining with mobile scaffold assembled from TITAN Megashore components

"Using their TITAN products, ISCHEBECK achieved a solution that was really easy to set up and handle."
Markus Vorholzer, site manager, contractors' consortium

The B294 trunk road connects Winden im Elztal to the other roads in the region around Freiburg im Breisgau, the "capital" of the Black Forest. Some 14,000 vehicles use the B294 every day.

The challenge

A 4.8 km long bypass will relieve the residents of Winden from the noise, pollution and dangers of road traffic. The key structure on this bypass is the Brandberg Tunnel at Oberwinden. The tunnel is 860 m long, with 750 m being driven underground and the approach built using open-cut methods. Mobile scaffolding is being used to carry out making-good work on the tunnel lining (shotcrete) to which the sealing layer will be applied. Economic and safe working conditions require mobile scaffolding that is easy to move, allows easy access to all working levels and complies with the industrial safety legislation. At the same time, the scaffolding must allow site vehicles to pass underneath.

The solution

The lightweight TITAN aluminium Megashore aystem, a modular system from Friedr. Ischebeck GmbH consisting of adjustable legs, frames and beams, forms the basis for the mobile scaffolding. By combining the various components, it was possible to build a scaffold matching the dimensions of the tunnel, with platforms 7.50 m long on four levels. Fixed castors and hydraulic jacks were then fitted to make the whole scaffold mobile. Markus Vorholzer, site manager for the Brandberg Tunnel consortium, was particularly impressed by Ischebeck's mobile scaffold: "All it needed was just a few simple operations and two people to move this whole lightweight scaffold quickly and easily to the next part of the tunnel. Using their TITAN products, Ischebeck achieved a solution that was really easy to set up and handle."

TITAN push-pull props distribute the horizontal loads acting on the topmost platform. In addition, TITAN HS guard rail posts ensure reliable safety barriers during the necessary making-good work at different levels. The structural works for the Brandberg Tunnel should be completed by the end of 2022. After that, further fitting-out works will be necessary before the tunnel can be opened for traffic.

Project:
Brandberg Tunnel, Winden bypass, Germany

Construction period:
2019 – 2022 (structural works)

Client:
Federal Republic of Germany, represented by Freiburg Regional Authority

Contractor:
ARGE Brandbergtunnel OU Winden (Baresel, Heitkamp, Storz),

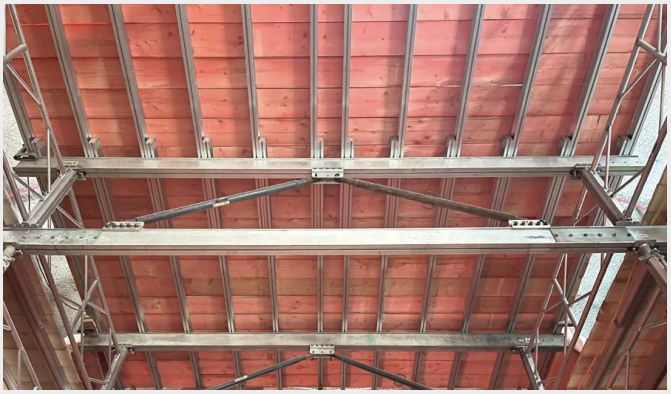
Products used:

- Adjustable aluminium legs, size 2
- Aluminium extension (1000 mm, 1250 mm)
- Swivel head plates
- Aluminium ledger frames (1800 mm, 2400 mm)
- TITAN 225 and TITAN 120 aluminium beams
- TITAN RSK 1 and TITAN RSK 3 push-pull props
- Hydraulic jacks
- Fixed castor units
- TITAN HS guard rail posts

At 860 m long, the Brandberg Tunnel is the key structure on the Oberwinden bypass

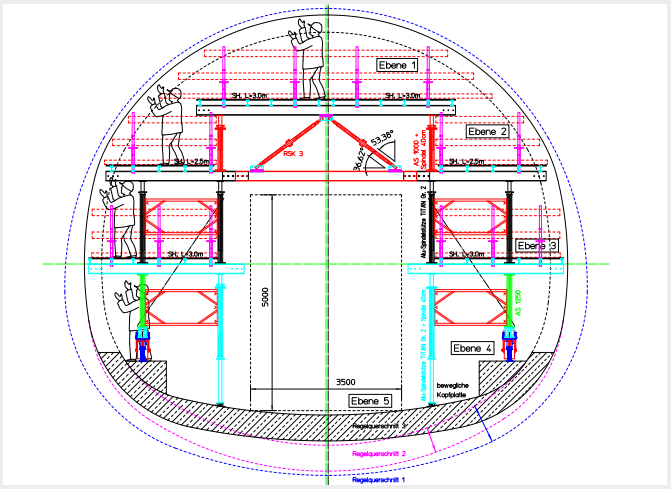
Fixed castors and hydraulic jacks were fitted to make the whole TITAN Megashore scaffold mobile

A mobile scaffold from Ischebeck was used to carry out work on the tunnel lining



TITAN push-pull props distribute the horizontal loads acting on the topmost platform

Swivel base plates were fitted underneath the TITAN adjustable legs to compensate for the angle of the base of the tunnel



Special attention was given to ensuring that the mobile scaffold is easy to use and quickly moved

Would you like to find out more about TITAN formwork systems?
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