

GO OR NO GO AFTER THE NIGHT SHIFT

Furka Tunnel – Amberg TRACK PRO secures operations every day!



Key Challenges and Solution at a Glance

- Heavy work along tracks
- Keep the track operational for the next 4 years
- Unpredicted hard rock with required blasting
- Making sure the track stays in place
- Prove the track has not move during night shift
- Amberg TRACK PRO proved to be the solution
- Quick set up, easy of use and reliable survey

AMBERG TRACK PRO

THE ONLY MEASURING SYSTEM WHEN SAFETY MATTERS



The Furka base tunnel is an important all year connection between the Valais and Uri in the Swiss Alps. The tunnel allowed year-round service on the Furka-Oberalp line, which is part of the famous Glacier Express route, a highly sought for tourist attraction.

The tunnel was opened in 1982 and has a length of 15.4 km (9.6 mi), making it one of Switzerland's longest railway tunnels. Since then, the tracks nor the adjacent drainage have been upgraded.

To meet today's safety standard, it was decided to replace the maintenance walkways both sides of the track, to upgrade the escape routes and installations. All this work must be carried out keeping the line in operation during the day. Since mid 2024 works have started in night shifts making all the upgrade including to replace the ballasted track to a slab track in the end.

Challenges where to support the track, to keep it in place, despite the heavy destruction and construction

work along the track. The biggest challenge was when the contractor encountered very hard granite, which could only be overcome by blasting. Blasting right next to the ballasted track. After each night shift the integrity of the entire track had to be proven so the first train at 5:30 am can pass tunnel safely.

With the Amberg TRACK PRO the contractor has found the perfect tool to get this prove simply, efficient and most important, reliable. They required an instrument which can assess the track in the shortest possible time and real-time defects calculation. After every shift just before all the machines leave the tunnel, a track worker ran the Amberg TRACK PRO where the work has been carried out that night shift. What is measured? Amberg TRACK PRO surveys the entire inner track geometry plus twist and cord length, plus the horizontal and vertical versine. Based on the EN13848-4 norm, any defaults surpassing the given tolerances would be clearly indicated and recorded. On a simple graph the operator can see, if he can give a GO for the next day opening of the tunnel.



Steve Fritschi

Marti Tunnel AG Switzerland

The **Amberg TRACK PRO** is the ideal tool to assess the track integrity to ensure a safe operation. It's simplicity and clear graphs empowers my tunnel team to measure without me being present. Without the Amberg TRACK PRO I wouldn't know how

I would do it! It has been a great benefit since the beginning of the works. The best is, I will be able to use the same system to lay the new tracks at the end of the project.