



CAN THE BRIDGE HANDLE 140 KM/H TRAINS SAFELY?

We've created a sophisticated monitoring system merging different fiber optic technologies with video surveillance. Customized to meet the client's needs and aligned with their sustainable energy philosophy, it provides real-time data with top accuracy and environmental consciousness.

CLIENT EXPECTATIONS

- highly reliable system for real-time monitoring of train safety and bridge health

INITIAL STATE

- temporary bridge designed for fast train crossings
- numerous vibrating points lacking structural stress monitoring
- need to monitor in remote areas
- heavy resonations during the train's 140 km/h crossing

ABOUT THE CLIENT

- major Austrian railway company transporting 323 million passengers and over 94 million tons of goods annually
- electricity for trains and stations comes from 100% renewable energy sources

BENEFITS OF THE SOLUTION



Increasing the efficiency of train movement

Precautionary measures to keep the 140 km/h speed for about 100 passing trains per day



Significant savings in time and personnel costs

Workflow optimization to minimize maintenance costs



Improve security and safety

Automated system with predefined thresholds for alarm activation

SOLUTION

We have provided the customer with valuable data on the behavior of the bridge under load caused by passing trains. The analysis software provided an overview of the entire system and outputs from each sensor. It was thus possible to set predefined limits for activating an alarm or indicating a breakdown.

The measured data revealed a long-term tendency of track subsidence and the degree of deflection of individual axles of trains passing optical sensor heads. Thus operators got information on the weight effect of the axles on the tracks, and it was possible to calculate the maximum train speed for safe crossing.




GALLERY






WHY WORK WITH US?

Our company was invited into the project thanks to its professional expertise and experience in implementing comprehensive real-time monitoring of the bridges.

The fiber optic technology we work with is highly reliable, accurate, and resistant to environmental influences. Thanks to this, we always guarantee the reliability of our systems.

-  FBG technology is the most suitable solution for deploying a large number of different types of sensors in very harsh environments.
-  Power transmitted over optical fiber enables remote operation of maintenance-free monitoring technology and eliminates the need for physical visual inspection.
-  Fiber optic bridge monitoring in remote locations without the need to access electricity at the monitoring location.

GET IN TOUCH WITH US and we will recommend you the most suitable solution for your project.

SAFIBRA, s.r.o., U Sanitasu 1621, 251 01 Říčany, Czech Republic
 +420 323 601 615  safibra@safibra.cz  www.safibra.cz