

Historical post-tensioned bridge over Motława river



EpsilonSensor: Case Study

The historical bridge in question was built in the late 1950s last century. After more than 60 years of operation, the question of the further maintenance and safety of the facility had to be answered. Four EpsilonSensors were installed within the safety-critical areas, i.e. at concrete cantilevers next to the construction joints, to support engineers in optimal decision-making. The near-to-surface installation inside the groove was applied as the best solution for existing concrete structures.



Benefits of application

- Easy and effective **installation within the existing concrete structure**
- Reliable and objective data supporting the experts for **optimal decision making**
- Support for the **safety management and maintainance** of a histrotical bridge
- Real-time estimation of **the influence of traffic loads**

Example results



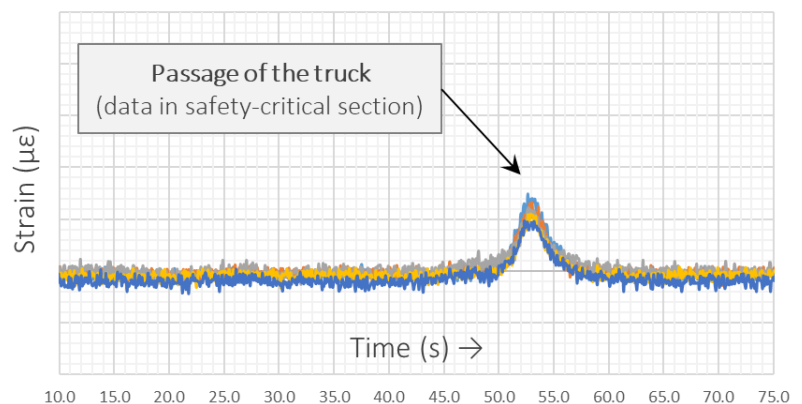
The main aim of the research was to investigate the real-time structural response of post-tensioned concrete cantilever to the actual traffic load, including cars and heavy trucks. High-frequency measurements confirmed the lack of active cracks and allowed a detailed analysis of the strain-stress state. All data will be used to support the expert in assessing of technical condition of this historic bridge.

 **1 153** measurement points

 **6 m** of sensing path

 **4 x** EpsilonSensor

 **short-term** (traffic load)



project
partner:

