

Case Study

Bridge Health Monitoring
The urban lifeline engineering
Anhui, China



Solutions > Bridge Health Monitoring

Background

The urban lifeline engineering is designed for engineering systems such as transportation, communication, water supply, drainage, power supply, gas supply, and oil transportation that have a significant impact on social life and production. In order to avoid safety accidents caused by the failure of urban underground pipelines and municipal transportation facilities, Hefei has planned and gradually established a safety operation monitoring system for urban lifeline engineering. The first phase of the engineering was launched in March 2016 and put into trial operation in September of that year. The second phase of the engineering was completed in April 2019, including 46 bridges, 819.5 kilometers of gas pipeline network, 734.1 kilometers of water supply pipeline network, 201.5 kilometers of drainage pipeline network and 14 kilometers of water pipeline network.



Challenge

At present, most of the bridges in Anhui Province have entered the aging stage, and some bridges that have long been diseased are operating with diseases, which undoubtedly poses huge safety risks. In order to improve the management and maintenance level of the bridge, to more accurately determine the actual working condition of the bridge, to provide a basis for bridge reinforcement or overhaul, based on the inspection of the appearance of the bridge, the safety monitoring of the existing bridge in service is carried out, and the bridge safety status data is grasped in real time. Become a big challenge to ensure traffic safety and promote social harmony.



Solution

The engineer proposed to use an automated monitoring system based on Liquid Level Sensor to monitor bridge deformation. Based on the research on the influence of the existing bridge structure in Anhui, the Liquid Level Sensor is used to monitor the deformation of the existing bridge. Select the bridge section to be observed and the typical measuring points to be monitored. By selecting the monitoring data of typical measuring points for analysis, real-time monitoring of beam deformation is realized, hidden dangers are discovered in time, and driving safety is ensured.

Products link

[Liquid Level Sensor](#)

[Dataloggers](#)



Key Features

- *Accurate and precise
- *Robust design and reliable
- *In-built temperature compensation
- *One single four-wire bus cable to connect each sensor to the dataloggers

Contact us

CGEO INTERNATIONAL LIMITED

A: Room 06, 13A/F., South Tower, World Finance Centre, Harbour City, 17 Canton Road, Tsim Sha Tsui, Kowloon, Hong Kong.

T: +852 2206 0092

F: +852 3003 0133

E: info@cgeo-instruments.com