Solving Bridge Maintenance Challenges through Accurate, Non-Destructive Defect Detection

To mark the 48th National Quality Month, Jiangsu Provincial Transportation Engineering Construction Bureau partnered with CCCC First Highway Engineering Group Co., Ltd. to host a specialized technical exchange.

The event focused on enhancing the troubleshooting capabilities of quality managers. By collaborating with key project offices, they addressed critical challenges in bridge maintenance, specifically focusing on accurate and non-destructive detection of hidden concrete defects.

At the organizer's invitation, Shanghai Lrel Instrument Equipment Co., Ltd. ("Lrel"), our authorized partner, presented Proceq ground penetrating radar (GPR) solution. The team conducted live demonstrations and shared technical insights based on their findings.



Front of test block



检测试块

On-site, Lrel used two Proceq GPRs—the GP8100 and GP8800—to scan a standard concrete defect test block. The system generated real-time 3D imaging that intuitively displayed the location, size, depth, and distribution of internal defects, achieving a "single scan, instant clarity" result.

Key Advantages of Proceq GPR Systems

Compared to traditional testing methods, Proceq Ground Penetrating Radar offers several outstanding advantages:

- Non-Destructive Testing (NDT): Conduct comprehensive inspections without damaging the concrete or compromising the structural integrity of the site.
- 3D Visualization: Generate intuitive 3D maps that clearly show the shape, depth, and extent of defects, providing quantifiable and traceable data for every scan.
- Superior Penetration: Accurately identify hidden flaws located behind dense reinforcement bars or deep within the structure.
- High Efficiency & Reliability: Robust anti-interference technology reduces human error and ensures stable performance, making it ideal for large-scale, standardized inspections.

The on-site demonstration was highly acclaimed by attendees. Organizers praised the system's performance, noting that the Proceq solution successfully delivers ***"visible, accurate, and verifiable"*** results.

By addressing the limitations of traditional methods, it significantly enhances the precision and efficiency of structural defect inspections. Ultimately, this technology provides robust technical support for quality control and the final acceptance phase of bridge construction.

If you are interested in Proceq GPRs, contact us today for a demo.



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