Trimble GEDO GX50 Laser Scanning System

Korec Group

At the end of 2021 Trimble launched its new Trimble GEDO GX50 Laser Scanning System for clearance analysis and asset data collection for railway applications. The GX50 is unparalleled in being the first system in the world that offers a rail specific TMD mounted scanner. It is also the next stage in development of the Network Rail Approved GEDO Scan System.

Rail specific with a unique configuration

In particular, the GX50 system is unique in offering both a Single Head configuration with one laser scanner and a Dual Head configuration with two laser scanners. The scan heads can be flexibly adjusted depending on project requirements with the Dual Head Butterfly orientation allowing for a more detailed scan than even a static laser scanner can provide. This ensures a far higher degree of asset identification and analysis, vital for the fast and clear identification of assets such as OLE and cross-track assets that can be hard to identify or simply not scannable with other existing systems.

Faster data collection with greater accuracy

Through a combination of fast and accurate onsite data collection combined with the efficient handling and processing of that data with Trimble's GEDO Scan Analysis software, the GX50 is a significant breakthrough in tackling the age-old problem of how best to manage track access/possessions and their attendant time constraints. The GX50 is mounted on a Track Measuring Device which means that scanning can be undertaken at walking pace with no need for time consuming or difficult set ups track side. On recent tests, two interesting statistics emerged:

■ The GX50 was able to scan at a rate of 5,000 metres per hour compared to the rate for a static scanner on a tripod of 300m per hour.

■ On a recent 7km trial for a KOREC customer, the GX50 completed the job in just eight hours compared to the same survey undertaken using traditional methods (height stagger gauge and laser measurement) which took 450 hours.

From reactive to proactive

The speed of an overall scan project is further assisted by some useful functionality in the GEDO Scan Analysis software. This software allows for automated specific analysis of OLE and track for fast profile finding and survey detail. Furthermore, clearance analysis with static or dynamic clearance can be checked live in the field on the controller. This enables surveyors to be proactive rather than reactive through efficient issue reporting from the job, for example in the cases of overhanging vegetation or other envelope constraints, rather than having to wait for the issue to be spotted in the office during post-processing.

Additionally, back in the office, the scan data can be revisited for different disciplines as and when required with no need to return to site for further surveys. For example, when the track survey is done, if you need an OLE height and stagger survey, no problem. Similarly, if you now need to perform platform gauging, again there is no problem. All the data is there, all of the time. This keeps boots off ballast and minimises disruption to passengers through additional track possessions

Successful trials

Launched in the second half of 2021, the Trimble GX50 has already completed successful trials on major projects such as an OLE survey of the Severn Tunnel (COLAS Rail).

In short, the Trimble GX50 is a truly unique and groundbreaking scanning solution delivering faster and more accurate scan data than any other system. It is a massive step forward in decreasing time on site whilst improving the quality of data collected, all factors that support Network Rail's CP6 drivers of safety, efficiency and reliability.

Contact

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