

AT WORK

 TOPCON

KYOUSEI CONSTRUCTION INDUSTRY INC.

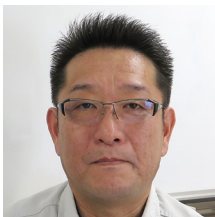


Operator workload reduced by 70%!

GLS-2000 is a surveying instrument essential for i-Construction.

KYOUSEI CONSTRUCTION INDUSTRY INC., established in 1938, is a general contractor with various experience of construction primarily in the Otaru and Shiribeshi areas as well as Sapporo, Hakodate, and Asahikawa areas. The company shared their experience regarding the usage of the 3D Laser Scanner GLS-2000 in a coastal retaining wall project under i-Construction specifications.

Utilizing 3D Data Produces Various Benefits



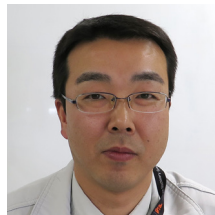
Osamu Ofuji, Construction Sec. Manager of Construction Dept.

“Our company started to use 3D CAD five years ago,” said Osamu Ofuji, Construction Section Manager of Construction Department. KYOUSEI is skilled at utilizing 3D data. For example, recently, their employees have imported drawings and construction work data on their iPads for use on job sites. “We can imagine objects on 2D drawings in three dimensions in our heads. In a sense, this is an acquired professional skill. However, if we use 3D data, more people can understand the job sites intuitively. It is also very effective for us to visualize more complicated shapes and issues, such as interference.”

KYOUSEI actively incorporates new technologies and is also aggressive in working on i-Construction. From an early

phase, they have actively proposed benefits of utilizing 3D data by producing booklets that describe 3D data use cases, conducting study sessions, and providing job site tours and other activities for clients. These efforts were fruitful and their clients have become to understand the benefits and now highly evaluate the technology. The retaining wall project was proposed by the company so that the work can be done under i-Construction specifications, which resulted in the use of the GLS-2000.

GLS-2000 Amazingly Reduced Work



Tetsuya Shimozawa, Construction Sec. Assistant manager of Construction Dept.

Tetsuya Shimozawa, Construction Section Assistant Manager of Construction Department, shared specifically about the application and effectiveness of the GLS-2000. “We are utilizing the GLS-2000 over a wide range of tasks from checking designs in surveying before construction, preparing construction work plans, to checking quantities and measuring after the completed work. To determine the effect of introducing GLS-2000, we compared five job sites that used the GLS-2000 with past job sites that used conventional measurement methods. Surprisingly, the results show that the operator workload was reduced by

70%. To be honest, we had not expected that we would see such a dramatic difference.”

The GLS-2000 also demonstrated outstanding performance when restoring damage caused by natural disasters such as landslides. Shimozawa continued, “We can measure inaccessible locations from safe places, and in addition, the process is fast. We actually had a case when we used the GLS-2000 to measure a site where a landslide happened at the end of last year, and we were able to respond to disaster-relief work quickly.”

Aim for Higher Goals

KYOUSEI is planning to use GLS-2000 for various applications such as operation and maintenance service for infrastructure. Ofuji said, “Possible examples of applications include displacement measurements, which regularly observes steep terrains and wave-dissipating blocks on the coast, and deterioration measurements of structures made of concrete. There are more possible examples of application that I can think of right off the top of my head. We may be able to measure the cross sections of overhangs or busy roads which cannot be measured by UAV.”

To further deepen the understanding of the characteristics of the GLS-2000, the company continues to verify how objects, installation places, time periods, and other factors that have impact on acquiring point cloud data. The company's enthusiastic attitude is very impressive.

* “i-Construction” is...

Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in Japan has been promoting “i-Construction”, that the Japanese construction companies shall utilize 3D data in all the procedure of construction work to increase its productivity dramatically, generated by not only the conventional equipment such as Total Stations and GNSS receivers but also Drones, 3D Laser Scanners, and ICT Construction Machineries. “i-Construction” is a registered trademark of the National Institute for Land and Infrastructure Management, MLIT.