



One-person surveying becomes more widely applicable!

The LN-100 greatly improves efficiency of stake-out jobs in mountainous area.

Ikehara Kougyou Co. Ltd. is general contractor, based on Higashigatsuma, Gunma, in Japan, having 100 years of company history. They have recently introduced the LN-100 to utilize in their measuring projects.

Take advantage of one-person survey in more simple way

Michiomi Tanaka, director and senior manager for Civil Engineering and Machine/Material Department explained how they came to purchase the LN-100. "We were already using a robotic total station, imaging station and GNSS receivers for our measuring projects, and therefore recognized the efficiency advantage of the one-person survey system. We use them for finished shape measurements by a total station or in a large construction site. However, for sites in mountainous area, we were using manual-type total stations because it has a lighter weight. So, the work efficiency was limited and needed to be improved. In an exhibition last year, we were introduced to the LN-100, which can be used as a one-person surveying system."



Michiomi Tanaka
Director and Senior Manager for
Civil Engineering and Machine/
Material Dept.

Offers great features for measurement in mountainous areas

Shigeo Kaneko, manager of the Civil Engineering Department, said, "We have applied the LN-100 at the site in a mountainous area for construction to prevent

landslides. For execution to shape slope faces and to install U-shaped gutters, we need to stake-out a lot of points and batter boards.

Traditionally, for this type of work, we were using a manual type total station, with an assisting prism person. Before starting, the operator of the total station and the prism person needed to share the detail of the project and location of prism points. Sometimes, the communication between them was not smooth and took a lot of time to complete. With the LN-100, since the measurement can be carried out with only one person, these communication problems are eliminated and as result, the time necessary to accomplish the work was cut in half. Also, the quality of stake-out and installation jobs are improved, since the measurement can be done by visually confirming the point. For site situations like the above mountainous area, the LN-100 is a very powerful and convenient tool, with features including a small and light weight design, one-person survey with minimum equipment, and very simple instrument set up with automatic leveling," he said.

Keisuke Uchida, chief of the Civil Engineering Department, highly appreciates its easier handling of 3D coordinates data. "The design data for this site was made on a 3D CAD system, with the height data as Z coordinate. Therefore, using the coordinates data, we can manage the installation of the batter board with the LN-100. For us, it was the first time to use the LN-100 on an



Shigeo Kaneko
Manager of the Civil
Engineering Dept.

actual site, we double checked the height of points with automatic levels and found the results measured by the LN-100 achieved the satisfactory accuracy. For the next job, we will not require the double check with level. The TopLayout software is very easy to operate and intuitive to perform the measurement with 3D coordinates," he said.

Perform One-person Surveying with LN-100 for smaller sites

Mr. Tanaka concluded their evaluation of LN-100 and their future plans, "The above mentioned site had a short construction period. The speedy and shortened measurement time achieved by the LN-100 was very effective to accomplish the measurement on schedule. We have been, so far, applying the one-person surveying for finished shape measurements by a total station or in a large preparation site. From now on, we can also utilize one-person surveying with the LN-100 for smaller size construction sites and forestry road construction. We also expect it will be effective to use in site preparation for the Solar Power facility. With the addition of the LN-100, as stated, we are equipped to cover various type of construction sites and expecting to achieve efficiency improvement of our measuring works."



Keisuke Uchida
Chief of the Civil
Engineering Dept.

Company: Ikehara Kougyou Co. Ltd.
Product: Layout Navigator LN-100
Location: Higasiagatsuma-machi, Gunma prefecture