



'Topcon LPS-900 Provides an Asphalt Paver with $\pm 2\text{mm}$ Accuracy'

"Despite the different conditions, the finishing accuracy was always stable"



Left: Yoshihiro Bando, manager of engineering department
Right: Kenji Kusakari, researcher of engineering laboratory

Seikitokyu Kogyo Co., Ltd., headquartered in Minato-ku, Tokyo, Japan, specializes in road pavement, civil engineering and water supply works. The firm's business also includes manufacturing of high-tech pavement materials such as water-retaining asphalt for reducing environmental temperatures, anti-freezing asphalt, high-drainage/water-permeable asphalt and noise-reduction asphalt.

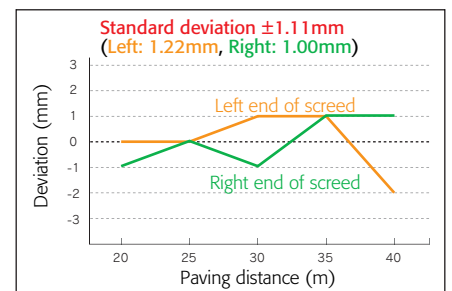
Seikitokyu Kogyo has been utilizing the Topcon LPS-900 robotic-based machine control system for dozers and graders. They recently conducted

tests at the company's test site to verify finishing accuracy of an asphalt paver with the aid of the LPS-900 system.

Kenji Kusakari, engineering laboratory researcher of Seikitokyu Kogyo, said "Accuracy was beyond our expectations. Standard deviation of the finished road surfaces was only $\pm 2\text{mm}$ all over the test field. We evaluated the system in diverse road widths with various operating speeds. Locations of the total station were shifted from one place to another. Despite the different conditions, the finishing accuracy was always stable."

Yoshihiro Bando, manager of engineering department, said, "This highly accurate machine control capability dramatically cuts down time, labor and cost. Accurate controls significantly save pavement materials. It has an ability to work without stakes and strings. This system requires far less workers assigned to guide a paver, which also improves safety."

Bando said, The GPT-9000A MC, a sensor for



Field test results
(speed: 2m/min., road width: 4m)

the LPS-900 system, has "full functionality of a robotic total station. We also use it for as-built survey that conforms to project management guidelines using total stations as a part of the ICT-Aided Construction*1 defined by the MLIT*2." After the field test, Seikitokyu Kogyo successfully implemented the LPS-900 system for the pavement improvement project in Niigata area.

*1 Construction methods that make use of Information and Communication Technologies (ICT) to increase work efficiency and quality.

*2 MLIT: The Ministry of Land, Infrastructure Transport and Tourism