

Ferrovial adopts stakeout robot and increases on-site productivity ten-fold

- The robot can draw thousands of coordinates accurately, plotting lines, marks and text from a CAD file
- The device optimizes production and resource use and reduces risks in hazardous areas
- Some robots of this type have been tested on Ferrovial construction sites such as Costa del Sol Hospital in Marbella and the Bensell office block in Manoteras, Madrid

Madrid, 22/08/2023. - Ferrovial has adopted a stakeout robot in its construction projects, an autonomous solution for plotting complex layouts on the ground, providing more accurate topographic measurements in complex projects. The company's goal is to optimize stakeout time and design quality to increase productivity on construction sites ten-fold.

This device is capable of accurately marking thousands of coordinates per day, replicating the lines, marks and texts defined in a CAD file, and can also correct design errors in real time. It provides invaluable support for workers on large construction sites, helping to avoid delays.

In addition to reducing stakeout time, these robots are also an excellent way of reducing the risks involved in conventional staking out methods in hazardous areas. This represents a clear advantage for the construction industry.

How a stakeout robot works

All stakeout robots on the market have similar features although, depending on the size and thickness of their tires, as well as the precision of the lines, they may be more suitable for indoor work or for civil works. Most of them can work on uneven terrain and are weather resistant, enabling them to operate normally in severe conditions.

A stakeout robot must be connected to a total station theodolite (TST) or work directly using GPS. A DXF or CAD file must be downloaded with a list of specific layers to be printed on the ground. Once configured, the robot starts to plot the structure on the ground, displaying progress via an online platform. The robot can also provide additional reports and more specific measurements, making it a comprehensive digital ally on site.

Conclusions after field testing

Some of these robots have already been tested on Ferrovial construction sites, such as the Costa del Sol Hospital in Marbella, the Bensell office building in Manoteras (Madrid), the Montepino warehouse in Illescas, the office block on Mahou Calderón, and a 148-home complex in Badalona. Ferrovial's team at Heathrow now have their own stakeout robot.

The adoption of these devices on sites is a sign of the speed at which construction is advancing, with digitalization playing a key role in enhancing productivity and efficiency in the industry.

About Ferrovial

Ferrovial, a leading global infrastructure operator, is committed to developing sustainable solutions. The company operates in more than 15 countries and has a workforce of over 24,000 professionals worldwide, close to 5,500 of them in Spain. Ferrovial is dually listed on the Dutch and Spanish stock exchanges, and is a member of Spain's blue-chip IBEX 35 index. It is part of the Dow Jones Sustainability Index and FTSE4Good, and all its operations are conducted in compliance with the principles of the UN Global Compact, which the company adopted in 2002.

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