

ABSTRACT

VERTICAL MEASURING SYSTEM AND METHOD FOR TRACING REFERENCE POINT

A vertical measuring system comprises a measuring instrument which has a leveling module and a measuring instrument main body provided on the leveling module and is provided on a reference point, a target device installed on a part to which the reference point is transferred and a guiding terminal which has a display module and a first communication module and is used on a side of the target device, wherein the target device has a target for emitting a target light toward the surveying instrument main body, the measuring instrument main body comprises a sighting image photodetecting module for acquiring an image of the target, a tilt sensor, a second communication module and an arithmetic control module, the arithmetic control module is configured to calculate a position of a rotation axis based on a locus of the target image and to transmit a positional information of the target image and a positional information of the rotation axis to the guiding terminal, and the guiding terminal is configured to display a position of the target and a position of a zenith on the display module based on the received positional information of the target image and the received positional information of the rotation axis.

[Figure 1]