

Material of tilt plate

Tilt Plate is used to measure the inclination of neighboring buildings due to underground excavation in structures or urban area construction.

In recent years, the aluminum tilt plate, which can never be used to supply at low cost, has appeared to reduce the quality of Geotechnical engineering measurements.

Aluminum Tilt Plate has a coefficient of linear expansion as high as $25 \times 10^{-6}/^{\circ}\text{C}$. Also, it will cause scratches on small faults even in case of small impact. It will not be possible to measure accurately when used in countries where temperature difference is high.

Considering the purpose of measuring the angle of inclination of the structure to measure fine angular changes of less than 0.1 degree to less than 1 Degree. The operation of supplying such a distant aluminum tilt plate would degrade the Geo-engineering task without accessing the technical point of view.

In the United States where the civil engineering measurement is developed, in the area where there is no temperature change, it is specified in the procedure that the tilt plate made of ceramics or the like is used in the region where the brass material is large in temperature change.

Sort	Standard Material	Commodity goods	Manufactured by ACE INSTRUMENT
Image			
Material	Brass	Aluminum	P.A ^{#66} + Glass Fiber 50%
Coefficient of linear expansion	$20 \times 10^{-6}/^{\circ}\text{C}$	$25 \times 10^{-6}/^{\circ}\text{C}$	$8\sim 10 \times 10^{-6}/^{\circ}\text{C}$
Characteristics	Very unity	Very fragile	Very unity
Usage	Use area without temperature	Can not be used	Use in areas with high temperature variations