

DEFORMATION MONITORING

The deformation monitoring of a land or construction represents a systematic action of observation, measurement and analysis of the way they respond to influence of surrounding agents, taking permanently in consideration the projection parameters of functionality, stability and safety.

For a proper monitoring of construction behavior in time constructions that are subjects to experimental solicitation obtaining observations in a relative short time in highly required.

METHODOLOGY

AKSM implements an instrumentation and monitoring system (MYSYS) that meets all the requirements specified by design. For each section of the works in a project, proposals are submitted for the setup of the geodetical monitoring system to the Client.

1. LEVELLING MEASUREMENTS

A. Buildings - structures

Levelling measurements are taken on levelling pins installed at the ground surface (road surface, sidewalks, etc.) or on buildings and / or on deeply embedded rods. The levelling pins on a surface or on buildings (e.g. vertical features, columns and walls) are of the embedment screw type of galvanized steel. Alternatively, where drilling and embedment is impossible, levelling contact pins are used with an aluminium plate or corner and a steel ball suitably adhered to a hemispherical hole of same diameter.

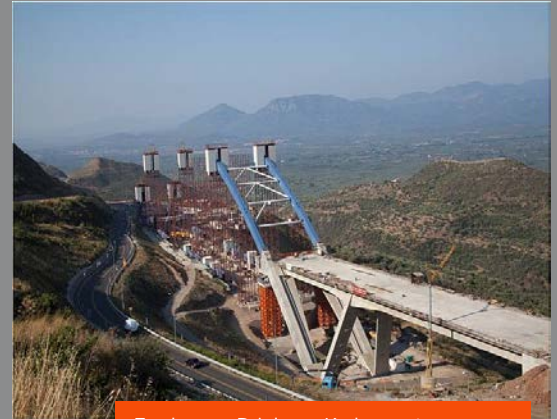
The measurements of the levelling points are carried out with a precision of at least $\pm 1\text{mm}$ per kilometer and always with open levelling routings, completely dependent from their two ends on the levelling starting points (benchmarks) with known elevation. The measurements instruments and their accessories (remote distance measurement devices, tripods, etc.) are serviced, checked according to the instructions of the manufacturer and will be replaced when it is necessary.

B. Ground surface above tunnels

Sections and grid of pins according to the monitoring design plan are installed. The distance between the pins of each section is subject to the design study. On the road pavements, the layout varies depending on the actual conditions.

C. Influence zone free field (in all other cases except the above)

Pins are developed on a grid covering the entire influence zone. Pins that cannot be installed (e.g. in streets with heavy traffic) can be placed and measured at any other location further to pertinent communication with Client.



Tsakona Bridge, Kalamata



Office Complex Building of Anangel ,
Kallithea, Attica.



Stavros Niarchos Foundation Cultural Center



Public Store, Syntagma, Attica