

A Review of Deformation and Settlement Monitoring on the Field: Types and Applications

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Abstract : This paper discusses using of instruments to monitor deformation and settlement. Specifically, it concentrates on field instruments such as inclinometer and plate load test and their applications in the field. Inclinometer has been used effectively to monitor lateral earth movements and settlement in landslide areas, embankments and foundations. They are also used to monitor the deflection of retaining walls and piles under load. This paper is reviewing types of inclinometer systems, comparison between systems, applications, field accuracy and correction. The paper also will present a case study of using inclinometer to monitor the creep movements within the ancient landslide on The Washington Park Station. Furthermore, the application of deformation and settlement instruments in Saudi Arabia will be discussed in this manuscript.

Keywords : inclinometer, plate load test, backfills, sand, deformation and settlement

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