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Preliminary results of pore pressure profiling in the Carpathian Flysch on landslide Tęgorborze-Just

Abstract

The ground changes its properties under water content conditions and, as a result, its strength decreases. Such a condition may be the cause of the development of volumetric and shear strains, and as a consequence, the formation of a slip surface. Zones of slip surfaces are preferred ways to infiltrate water. Pore pressure profiling with depth allows identification of such zones, especially in water content ground after more intense precipitation. In the article we present the preliminary results of the profiling of pore pressure in the near surface layers of the Carpathian flysch, on the landslide Tęgorborze-Just near Nowy Sącz. Measurement of pore pressure in flysch composition is very complicated due to the great heterogeneity of the medium. The tests were carried out in a coluvium to a depth of approx. 5.5 m. The obtained values indicate the presence of one main water flow zone, which may be a slip surface. The location of this zone is consistent with the inclinometer strain. Profiling was performed in several series using a CPTU static probe with a NOVA Acoustic cone. The research will be continued, especially in the conditions of greater water content.