

Experimental Study on Influence of Seepage Water on Seismic Resistance of Embankment

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During the mid Nigata prefecture earthquake in 2004, a lot of railway and road embankments collapsed in mountain regions. It seems that the main reason of these damages was the increase of the degree of water saturation and the water level in embankments caused by the typhoon just before this earthquake. In this paper, the shaking table tests of the embankment affected by seepage water were performed aimed at evaluating the influence of seepage water on seismic resistance. Furthermore, the simulation analysis making use of effective stress analysis was conducted in order to evaluate the applicability of estimation of the response acceleration and the deformation in embankment.