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液化引致土石流啟動的關係探討

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摘　　要　土石流啓動必先經過液化的過程，不論液化來自於水流推擠土石堆積產生剪應力不足抵抗，而後滑動變形產生液化或堰塞土體經堆積體內滲流作用產生向源侵蝕或滑動破壞等。其局部液化的現象都必需存在。是以掌握液化的形成可能可以提供作爲土石流啓動的時機的監測，並預先可以推測出其啓動是否發生，甚至其規模的大小。

以土石流啓動爲監測對象的預警系統，經本研究的理論推導完成並開發完成孔隙水壓力變化及液化移動傾斜的量測機構，加上現場實際裝設與運作，及現地現況的調查，並依其特性完成分析，則可組構成必要的預警系統。

關鍵詞：堆積土體、土石流、啓動、孔隙水壓力。

Investigation on Debris Flow Triggered by Liquefaction

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ABSTRACT　Debris flow is triggered by liquefaction. Upward seepage force causes the effective stress inside the debris pile to decrease, resulting in erosion or landslide. Observation of phenomena for locally liquefied earth can be applied to the prediction of occurrence of debris flow. This study examines the theoretical derivation of liquefaction mechanism and measurement devices for porewater pressure. Three field monitoring systems are used to verify the theory developed.

Key Words: colluvial soil mass, debris flow, triggering, porewater pressure.