

## 堰塞壩滲流破壞與電導度之關係探討

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**摘 要** 本研究以室內流槽試驗針對堰塞壩潰壩之型態、侵蝕速率、水位等與時間之關係進行探討，並以 Hilbert-Huang Transform(HHT) 時頻分析將震動訊號繪製成時頻圖，辨識模型壩潰壩時所產生之震動訊號特徵。並且加入體積含水量及電導度的量測，觀察其在壩體發生破壞、滑動前的變化。結果發現模擬的堰塞壩發生滑動之前，電導度值提早發生變化並且達到極限不再上升，進而當成壩體可能滑動地先起訊號。

**關鍵字：**Hilbert-Huang Transform(HHT)、堰塞壩、電導度。

## Explore The Relationship between Piping Tests for Landslide Dam Breach and Electrical Conductivity

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**ABSTRACT** In this study, We performed flume tests for model dams to discuss the relationships among failure patterns, erosion rates, flow depths and time of model dam failure. The characteristics of the vibrational signals caused by the failure of the model dams were identified using Hilbert-Huang Transform(HHT). And adding volumetric water content and electrical conductivity measurements to observe the changes between before and after of of model dam failure. The electrical conductivity changed and rise to the limit, before the occurrence of landslide dam.

**Key Words:** Hilbert-Huang Transform (HHT), landslide dam, electrical conductivity.

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