

礫石土石流停積之軸向排列探討

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摘要 本研究擬以現地調查土石流停積狀態下石礫之排列方式，探究土石流運動時土石流顆粒的內部作用，以瞭解土石流之性狀。因此本研究以火炎山自然保留區為對象，調查土石流礫石堆積的長軸軸向排列與現地環境的坡降緩急、流向彎折、河谷地勢等地形因子的關係，以探討它們停止搬運時的排列狀態。同時配合室內渠槽試驗結果，說明不同坡度、試料組成，對於礫石排列分布有何影響。

研究結果顯示，土石流扇狀堆積上的礫石排列有呈同心圓形之趨勢，其長軸軸向多垂直其流線；而渠槽內堆積段中間部之礫石長軸軸向以垂直流路方向較多，兩側部則平行流路較多；渠槽內流動段上礫石順沿土體移動，其長軸軸向多平行流路。

關鍵字：土石流、卵礫石、軸向

Study on the Axial of deposited gravels in debris flow

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ABSTRACT This research investigates the axial aspect the gravel presents when the debris flow deposited. And use the results to identify the characteristics of debris flows. Furthermore, we research the internal action of the debris flow when it move and understand the properties of debris flow. This research chooses the gravel bed region of the third ditch of Mt. Huoyan. After the field investigation, we discovered a close relationship between the arrangement of gravel in debris flow and the location terrain such as the slope, the flow direction, and the topography of the riverbed. We analysed the arrangement phase when they stop transporting ,and explain the influence of the distribution of arrangement of gravel with the laboratory test results.

The result shows that the distribution of gravel closer to the central part of the river more, the quantity of the major axis of gravel vertical in flows more. And it is opposite when it happens in two sides of the river. Its major axis arranged in concentric circles and perpendicular to the direction of its flow line, when it happens in the fan-shaped accumulation.

Keywords: Debris flow, Gravel, Axial aspect

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