# 投潭水沖擊位置受制上下游渠床坡度影響之探討

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**摘　要**　台灣河道大多坡陡流急，縱向沖刷能力大，為達消減洪水沖刷能力，達到穩定河床，保護跨河、防洪構造物安全及取水供民生、灌溉之目的，設置跌流工、防砂壩或攔河堰等橫向構造物為慣常使用之方法。雖可穩定上游河道，卻因砂石無法向下運送，而淤積於跌水工前河道渠床，導致跌水工上游渠床產生坡度，使水流成超臨界流況沖擊下游渠床，亦是消能工最易受損之處。本研究主要係藉由理論推導與實驗比較，探討投潭水沖擊位置受制跌流工上下游坡度改變之影響。

**關鍵詞**：沖擊位置、渠床坡度、投潭水。

# Effect on Impact Position of Free Overfall by Upstream and Downstream Channel Bed Slopes

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**ABSTRACT** Most of Taiwan rivers are rapid and steep with large capacity of vertical erosion. The hydraulic structures crossing the river such as drop structures, check dams and weirs have been widely used to decrease the flood erosion, stabilize riverbed, protect structures crossing the river, and provide civil water and irrigation. The hydraulic structures make upstream channel stable while the sediments cannot be transported downstream and stay in front of riverbed of drop structures on the other way. These structures usually induce the change of upstream slope and super critical flow condition which makes a large impact force on the downstream with the result of destroying energy dissipation structures. This paper aims at studying the theoretical analysis and experimental compared of impact location with the variation of upstream and downstream channel bed slopes.

***Key Words :*** Impact position, channel bed slopes, free overfall.

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