

عنوان مقاله:

Dynamic pressure fluctuations at real-life plunge pool bottoms

محل انتشار:

کنفرانس بین المللی هیدرولیک سدها و سازه های رودخانه ای (سال: 1383)

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خلاصه مقاله:

Scour of rock downstream of dam spillways may be generated by jet impact. Generally, jets impact into a plunge pool downstream and diffuse through the pool. This results in a turbulent shear layer, which generates significant pressure fluctuations that might enter underlying rock joints. Recent research performed at the Laboratory of Hydraulic Constructions in Lausanne revealed that these pressure fluctuations may be amplified inside rock joints and are directly responsible for progressive break-up of the rock. Hence, appropriate assessment of these pressure fluctuations is crucial for a physically correct scour evaluation. At present, a respective amount of data is available on pressure fluctuations measured on laboratory models and for perfectly flat pool bottoms. However, real-life plunge pools are characterized by a much more complicated bottom profile, which changes during scour formation. Therefore, a research project focuses on measurements of pressure fluctuations at appropriately shaped, laboratory scaled pool bottoms. The profiles to be tested have been derived from observed model and/or prototype cases. The obtained results are described in a companion paper

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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