

عنوان مقاله:

Experimental investigations on high-velocity jet characteristics and its influence on plunge pool rock scour

محل انتشار:

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

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خلاصه مقاله:

In high dams, water spill operations for flood management by means of highvelocity jets often imply the dissipation of the flowenergy directly on the rocky riverbed. This paper presents updated information on ongoing research on plunge pool scour. Experimental investigations have been conducted to estimate jet turbulence intensity at issuance for prototype velocities up to 30 m/s. This parameter is of key importance for the definition of the jet characteristics at impact downstream and for dynamic pressures in the pool bottom. Turbulence intensities of 3 to 14% were observed for velocities between 10 and 29.5 m/s. Furthermore, experimental work is underway to assess the influence of pool geometry (lateral confinement) on jet development and on pressures at the water-rock interface. Besides a better understanding of plunge pool scour formation, the research results aim at improving measures for rock scour management, such as pre-excavation and tailpond dams.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/3841>

