



Artificial Roughness Bed Stilling Basin and It's Design Method

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Abstract: A new type of stilling basin: artificial roughness bed stilling basin, and the corresponding new design method are proposed in this paper. The characteristics of the new design method is that the sequent depth of the jump is given and the fore flow depth of jump is in need to determine. The formulae for the length of the flow profile from the contraction section to the hydraulic jump and the sequent ratio for the hydraulic jump in the channel with artificial roughness bed are reduced. The stilling basin with and without artificial roughness is tested by hydraulic model to examine the effect of artificial roughness on hydraulic characteristics of the stilling basin.

Keywords: Stilling Basin; Artificial Roughness; Hydraulic Design; Hydraulic Characteristics

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