عنوان مقاله:

Proper Numerical simulation of water surface profile over stepped spillway Using Different Solvers

محل انتشار:

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تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Enhancing the energy dissipation along a spillway is of great importance for more efficient design of the downstream structures. In this regard, a number of steps can be added to the spillway in order to increase the flow turbulence. By this action the dimensions of stilling basin and consequently the cost is significantly reduced. Inthis research the flow over stepped spillway and the downstream of hydraulic jump is modeled using FLUENTand FLOW-3D softwares. The water surface profile over the spillway and the hydraulic jump is then compared with that of the experimental model and good agreement is observed. The capability of FLOW-3D in allowing the air to escape through free surface is investigated by simulating a dam break problem and comparing it with theexisting experimental result. The results show that this software allows the air escape through a free surface if the Drift-flux model and gas escape model is invoked

کلمات کلیدی:

Spillway, Hydraulic jump, water surface profile, FLUENT, FLOW-3D