

عنوان مقاله:

Hydraulic Investigation of Triangular Plan Form Vertical Drops

محل انتشار:

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خلاصه مقاله:

The vertical drop is one of the most widely used hydraulic structures for dissipating the destructive energy of water. The purpose of this research is to investigate the effect of the two difference height, and five vertex angles of a triangular plan form vertical drop on energy dissipation and average velocity using the volume of fluid (VOF) method. The findings revealed that by decreasing vertex angle of the triangular plan form vertical drop, energy dissipation increases. The lowest relative depth of the pool occurs with this drop. In contrast, as the vertex angle of the triangular plan form vertical drop decreases, the average velocity at the foot of the drop increases and the maximum average velocity in the triangular plan form vertical drop with an angle of 60° degrees and a height of 0.2 m is higher than other models. The average downstream velocity also decreases by decreasing the angle and this decrease is more intense in the center of the channel than on the sides.

کلمات کلیدی:

Triangular plan form vertical drop, Energy dissipation, Relative depth of the pool, Average velocity

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