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Physical modelling analysis of Chenderoh spillway

Abstract

This paper analyses the variation of water level height in scaled down physical model of Chenderoh spillway and velocity through the spillway is measured. As a part of the physical model design process, a 3D model drawing of 1:20 scaled of spillway has been drawn based on basic scale ratios. Froude number is used for scalling down method as it is more relevant in this study compared to Reynold number. Spillway physical model then been operated with five different water levels. It shows that the height of water level would affect the velocity proportional with the flow rate of water. The highest velocity in this study is 0.6667m/s with 0.11m water level height. Based on the results, the higher the water level, the higher the velocity of water through the spillway.