Properties of Interfering Hydraulic Jumps on an Incline

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The purpose of this experiment was to explore the impact that the angle of elevation of a surface has on two interfering hydraulic jumps. The system used for this experiment was constructed using basic materials that can be found around almost any household. These materials ranged from glass to wooden boards to tape and were combined to create an apparatus based around a sink with two faucets. For each trial, the flow rates and positions of the two faucets were controlled with the angle of elevation being altered for five trials at the given elevations: 3.8°, 7.7°, 13.6°, 18.4°, 23.6°. This experiment suggests a direct correlation between the angle of elevation of an incline and the properties of the interfering hydraulic jumps. Gaining a better understanding of the properties of hydraulic jumps under different conditions allows for a stronger understanding of the behavior of hydraulic jumps. This can be applied to better understand hydraulic jumps in more realistic environments throughout nature and sheds light on the endless research that can be done around hydraulic jumps.

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