

Contribution to Experiments of a Free Surface Supercritical Flow over an Uneven Bottom

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Abstract : The aim of this study is to examine, through experimentation in the laboratory, the supercritical flow in the presence of an obstacle in a rectangular channel. The supercritical regime in the whole hydraulic channel is achieved by adding a convergent. We will observe the influence of the obstacle shape and dimension on the characteristics of the supercritical flow, mainly the free-surface elevation and the velocity profile. The velocity measurements have been conducted with the one dimension laser anemometry technique.

Keywords : experiments, free-surface flow, hydraulic channel, uneven bottom, laser anemometry, supercritical regime

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