

EFFECT OF SILT ON INCIPIENT MOTION OF GRAVEL PARTICLES

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ABSTRACT

This study presents the experimental results on incipient motion for gravel particles in the presence of silt. The channel had a test section of 6.0 m length, 0.75 m width and 0.18 m depth starting at a distance of 7.0 m from the channel entrance. The channel bed of silt-gravel mixture was prepared using dynamic compaction method. The visually observations have been made for the incipient motion of gravel particles in the present study. The beginning of movement of gravel particles in the bed load form is treated as the incipient motion condition. The measurement of discharge, water surface profile, and bed surface profile were taken at an interval of 0.50 m along the flow in the test section of the flume corresponding to the incipient motion condition. The observed value of dimensionless critical shear stress for gravel particles in the silt-gravel mixture is found to be lying below the Shields curve (Brownlie, 1981).

KEYWORDS: *Critical Shear Stress, Silt-Gravel Mixture, Incipient Motion, Silt Content*

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