

SEDIMENT TRANSPORT IN RIGID BED  
RECTANGULAR CHANNEL WITH NO DEPOSITION

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## ABSTRACT

This project is based on the experimental investigations of sediment transport in fixed bed channels. It attempts to analyse the bedload transports of non-cohesive sediments in fixed bed channel with no deposition. By using these new data as well as previously available data, comparison are made to find the differences in previously work and to advanced the understanding of the processes involved. The results of this analysis are compared with the result obtained by Novak and Nalluri for bedload transport equation in fixed bed channel of rectangular section.

The experiments were carried out at the Hydraulics Laboratory of Civil Engineering Department, MARA Institute Of Technology, Shah Alam, Malaysia.

## 1. INTRODUCTION.

The importance of sediment transport phenomenon is undeniably in the field of River Engineering. Still, there are some uncertainties and enigmas. On the other hand, sediment transport is one of the handicaps at design and operation of hydraulic structures, such as irrigation and drainage channels, dams, hydropower turbines, well and so on.

Sediment transport also not amenable to a rigorous theoretical treatment at present. A multitude of formulas and methods have been proposed for sediment transport calculations. In the other word, a sound understanding of the basic mechanism of sediment transport and a knowledge of available methods for computing its magnitude are necessary for almost all of work related to river engineering.

This project is based on experimental investigation of sediment transport in rigid rough fixed bed rectangular channel without deposition encompassing the field of incipient motion of single particles. The results obtained will be compared to the theory.