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Study on the law of exposure degree in different equivalent particle size

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ABSTRACT

By using the flume generalized experiment to investigate the law of different equivalent particle size exposure degree which was matching by different uniform sediment particle size. Through analyzing the 300 groups of experimental data, the result show that, when the equivalent particle size was matching by two groups of different diameters uniform sediment and the equivalent sediment particle size is close to fine uniform sediment particle size, in the process of highest bed surface to the average bed surface, the exposure number of fine sand is more than coarse sand in different height level bed surface, the exposure number of fine sand increasing amplitude relatively homogeneous, but coarse sand increasing amplitude rapidly decreases, and the exposure number of the equivalent sediment on the bed surface is more than the below surface. When the equivalent particle size was matching by two groups of different diameters uniform sediment and the equivalent sediment particle size is close to coarse uniform sediment particle size, in the process of highest bed surface to the average bed surface, the exposure number of fine sand is less than coarse sand in different height level bed surface, but the exposure number of fine sand is larger than coarse sand increasing amplitude, fine sand exposed but its exposure to the number of particles increase amplitude is larger than coarse sand, the exposure number of equivalent sediment on the bed surface is more than the below surface. When the equivalent particle size was matching by two groups of different diameters uniform sediment and the equivalent sediment particle size is close to both sediments particle size, in the process of highest bed surface to the average bed surface, the exposure number of fine sand is close to coarse sand in different height level bed surface, and the exposure number of the equivalent sediment on the bed surface is close to the below surface. These experimental results consistent with the common phenomenon of the exposure number of equivalent sediment on the natural gravel bed surface is more than the below surface.