

عنوان مقاله:

Particle Response to Asymmetric Waves in the Swash Zone

محل انتشار:

پنجمین کنفرانس بین المللی سواحل و بنادر و سازه های دریایی (سال: 1381)

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خلاصه مقاله:

A quantitative understanding of near shore sediment dynamics and resulting morphological changes is essential for appropriate coastal management and engineering designs. Sediment transport in the swash zone subject to wave attack producing very active erosion and accretion, is of major importance in this context. The modelling of sediment transport in the swash zone has been subject of several researches over the last decade. Nevertheless, the adaptation of sediment transport formula, which were originally established for deeper flow conditions, appears unable to efficiently predict the rate and pattern of the beach profile change of the swash zone (Holland et al 1998). It is evident that the understanding of the physical processes involved in this region is a major issue. The flow over the beach is the swash zone due to incident waves is different from the deeper water. Here, the near bed velocity profile, which is the agent of sediment transport, is highly asymmetric with abrupt acceleration in up-rush and rather smooth change in backwash (Shanehsaz-zadeh et al 2001). In this study, the behaviour of sediment particles under asymmetric waves were experimentally investigated, in order to improve insight into sediment process involved in the swash zone. The destination of particles (jump length) and the number of particles that move (weight), were measured under the action of individual asymmetric waves. This attempt can be considered as a basic research to enhance the accuracy of the sediment transport modelling in the coastal area, especially in the swash zone.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

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