

عنوان مقاله:

Effective Parameters on Hydraulic Stability of rubble mound breakwater

محل انتشار:

ششمین کنفرانس بین المللی پژوهش در علوم و مهندسی و سومین کنگره بین المللی عمران، معماری و شهرسازی آسیا (سال: 1400)

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نویسندگان:

Nasim Rezaei Dehaj - *Master of science in hydraulic structures, University of Kerman*

Mohsen, Dehnavi - *Master of science in hydraulic structures, University of Kerman*

Mohsen Abedi - *Master of science in hydraulic structures, University of Kerman*

خلاصه مقاله:

Breakwaters have an important role in creating a safe and secure area for offshore structures and ships. Damaging and destroying breakwater can be catastrophic. In recent years, the stability of breakwaters has become a fundamental issue in engineering. The main purpose of this study is to investigate significant parameters affecting the hydraulic stability of rubble mound breakwaters. This paper is to use CFD modeling for the problem of flow and phase distribution. Several CFD codes have been successfully used to predict void fraction profiles in and phase distribution applications. Generally, breakwater stability consists of two categories, hydraulic stability and structural stability. In this study, the parameters affecting both structural and hydraulic stability are introduced. These parameters include wave height, wave frequency, berm level, berm width, water depth, and structural slope. Numerical results are compared with the standard experimental and theoretical results available in the literature. The results show that wave height has the most significant effect on the hydraulic stability of rubble mound breakwater.

کلمات کلیدی:

rubble mound, Breakwater, Hydraulic stability, CFD simulation

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