

عنوان مقاله:

Sensitive Analysis on Effective Parameters in Breakwater Design against Wave Diffraction

محل انتشار:

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خلاصه مقاله:

Beaches erode and the obvious environmental and landscape degradation of many coastal stretches are problems that coastal engineers are spending time solving. Different protection methods have been used over time, most on the basis of the artificial nourishment of beaches and the building structures such as groynes and detached breakwaters. Breakwaters are artificial structures, generally parallel to the coastline, inspired by the working of natural formations, protecting a certain stretch from wave action and being able to create accretion areas. This is why these structures have been in general use, with different results, since the 1970s in countries such as Japan, the United States, Spain, Italy, and Australia. Lakes coast confronts a wide range of natural hazards from severe storms, floods, landslides and shoreline erosion. All of these coastal hazards threaten both lives and property-a problem that becomes more pressing as the coastal population continues to rise. Coastal erosion, deposition, and flooding can also be exacerbated by lake level regulation, water diversion and coastal resource use. Structures like breakwaters always confront sea phenomenon like diffraction and refraction of waves. Diffraction, which be made by contact of water waves to breakwater structure and results almost concentric circles of waves, makes evaluating this phenomenon far more important on structures. By using the powerful software MIKE 21 in sea hydraulics problems, finding the optimized model of the breakwater arms can be obtained. Meanwhile other factors are playing role in this optimized model. By sensitive analysis of the main parameters such as entrance wave spectrum, wave period, porosity coefficient of breakwater and effect of spongy layers on the results, the partnership and affection of all parameters on the result of the model will be revealed. Presenting the optimized breakwater models against diffraction and Showing .the most important parameters on the basis of sensitive analysis is the results of this research

کلمات کلیدی:

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