

Study of Wave Refraction Model at Mitou Coast of Taiwan

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Abstract

The wave number conservation equation and the theorem of wave energy conservation was applied to use for derive out the relationship equation between the change of the wave height and the water depth. In the above mentioned correlation equation where the refraction coefficient and the shoaling coefficient was included. In the computation of the change of wave direction, the assumption of irrotational flow was used. Meanwhile, the coordinate transform to evaluate the curvature change along the wave ray and the vary rate of the wave celerity along the orthogonal line was computed. As to the control of the limitation of breaking wave height, both the equations which derived by McCown (1894) and Iche (1994) was chosen for computation then select the small value for advanced calculation. Besides, the governing equation which developed by Tang (1986) for compute the wave after broke was applied. Results shows there have serious erosion at the place where near to the north breakwater of Mitou fishery harbor was found. The same phenomenon was found in the site also.