

عنوان مقاله:

Wave Pressures on the Crown Deck of Upright Breakwaters

محل انتشار:

چهارمین کنفرانس بین المللی سواحل و بنادر و سازه های دریایی (سال: 1379)

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خلاصه مقاله:

The loadings generated by the collapse of an overtopping discharge onto the horizontal top surface of vertical breakwaters is not well-addressed in the literature. The prediction of these loadings gains greater importance with the trends of reducing the crest freeboard and of using the crown deck for industrial or recreational purposes. Two-dimensional hydraulic model tests were carried out in a wave flume equipped to generate and absorb irregular waves. The experimental programme was designed to explore the effect of the principal geometrical and hydraulic parameters: significant wave height H_{si} , peak period T_p , water depth at the toe of the wall d , seabed slope and crest freeboard R_c . The water pressures over the crown deck were measured using six transducers. An additional transducer was placed in the front wall at the still water level. Video records were used to measure the height and the velocity of the overtopping jet, the falling distance, and wave gauges used to measure the transmitted wave behind the structure. From a parametric analysis of the test results, simple design indications are provided for the preliminary analysis of the stability of structures on the breakwater crest.

کلمات کلیدی:

coastal structures, water pressures, wave overtopping, crown deck, vertical breakwaters

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