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WAVE RUNUP ON SMOOTH AND ROUGH SLOPE OF COASTAL STRUCTURES

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ABSTRACT

Knowledge of wave runup levels is important for a proper design of the coastal structures especially breakwaters. An overall view of the literature, support the assertion that smooth slopes causes the highest possible runup levels. Test were conducted with regular waves of various incident upon the model testing slope.

Testing was done using a wave flume of 12 m length, 0.3 m wide and 0.4 m depth. The slope ranges from $\cot \alpha$ = 1.4, 1.9, 3.02, 3.38 to 5 and the two different condition slope formed as smooth and rough.

Final analysis results in two sets of design formula. One set yields formulaś gives the results of various runup levels as function of the surf similarity parameter of smooth slope. The other set presents the various runup levels as function of the surf similarity for rough slope.