WAVE OVERTOPPING ANALYSIS IN SEAWAVE SLOT-CONE GENERATOR (SSG) MODEL

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ABSTRACT

Research in wave overtopping of coastal structures has been the subject of numerous investigations over the past 50 years. Since then the overtopping prediction tools for typical sea defense structures have continuously been refined. The term wave overtopping is used here to refer to the process where waves hit a sloping structure run up the slope and eventually, if the crest level of the slope is lower than the highest run up level overtop the structure.

The purpose this research is to know the overtopping volume which come into each reservoirs at Seawave Slot-Cone Generator (SSG). Model simulation is performed by variation of wave height, wave period, and angle slope of structures was setup in physically and numerically.

The influence of wave height is linier to total overtopping volume, wave height increment increase overtopping volume. As for wave period influence the opposite of total overtopping volume, small period have potential energy than overtopping volume is bigger. Small (sharp) slope influence can give value of big overtopping volume. Angle influence have important role at distance propagation and space (place) for transform wave energy to electric energy. The bigger total overtopping volume exist at 13 cm wave hight and 1 second wave period in slope 30° ie 12,1 liters.

Key words: Seawave Slot-cone Generator, overtopping, reservoirs