Oceanography/Vol.5/No.20/Winter 2014/1/1-1

Estimation of the Reshaped Profile Parameters of Berm Breakwaters Considering Various Wave Conditions

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Received Date: March 4, 2013 **Corresponding Author* *Accepted Date: November 30, 2014*

Abstract

Reshaped profile status of berm breakwater has a very impartant role for the stability of this kind of structure during waves attack. In this paper, key parameters of the reshaped profile such as step height of the deposited area and depth of intersection point between original berm and reshaped berm were estimated by introducing the related formulae, considering various sea stste and structural parameters. In this line, a series of 185 tests have been carried out to investigate the influence of various sea state conditions such as wave height, wave period and water depth at the toe of the structure, and structural parameters such as berm elevation from still water level and armor stone size for prediction of the berm recession. Comparison between the estimated intersection depths by this formula and formula given by PIANC revealed that the estimation procedure predicts well according to the present data. Also to assess the validity of the present formula, a comparison was made between the present formula and formulae given by other researchers, employing partial of Moghim data.

Keywords: *Reshaping Berm Breakwater, Reshaped seaward profile, Step height, Intersection depth, Experimental Modeling.*