

DAMAGE OF REINFORCED CONCRETE SLABS FROM CONTACT DETONATIONS

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In this study, the damage of reinforced concrete slabs subjected to contact detonations has been studied. Three different amounts of high explosive Pentolite were detonated at the center of the upper surfaces of two kinds of reinforced concrete slabs, having different concrete strengths and simply supported at the both edges. The test results were analyzed with others' previous data for crater, spall and breach. The main results obtained are as follows: 1) Effects of the kind of explosive and the concrete strength on the shapes and sizes of crater and spall are slight. 2) Normalized diameter-depth relationships for the crater and spall are represented by two lines, related to the occurrence of breach. 3) Normalized crater and spall depths correlate well with the scaled concrete thickness.