

# PARAMETER STUDIES FOR EMBEDDED MUNITIONS

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The embedment parameters that affect blast measurements for munitions that are embedded in a structure has not been investigated thoroughly. Recent interest has generated a series of tests and calculations to determine the important factors relevant to these phenomena. ARA's hydrodynamic code, SHAMRC, has been used to augment the results from experimental tests by modifying specific parameters and evaluating their effect on the blast in an adjacent room. Embedment, confinement, charge size and variations of fill are all varied and the results tabulated to determine the most important factors. Embedment relates to the depth of the concrete wall between the munition and the room in question, or the degree to which the weapon has penetrated into the room. Confinement refers to the confinement behind the munition/wall, and is either sand or open air. SHAMRC's approximate method in dealing with the concrete strength has proven to be robust while maintaining the speed and efficiency that has been its best attribute. A brief description of the concrete model is included. The results from these parameter studies will be used in a fast running engineering model.