

FREE-FIELD AIRBLAST ON STRUCTURES: COMPUTATIONAL MODEL

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Abstract

Prediction of airblast loads on structures from near surface detonation requires hydrocode calculations run on HPC parallel super computer resources. Initial free-field airblast calculations provided verification of the computer model against CONWEP airblast prediction curves. A rigid structure was added to the computer model and additional calculations were performed to evaluate loading on the faces of the structure. The SHAMRC (Second-Order Hydrodynamic Automatic Mesh Refinement Code) hydrocode was used for all HPC calculations. This paper presents an analysis of the computer simulation and comparison of the calculated results to a limited set of measured data from small-scale experiments.