

P63 Sensitivity of JWL Parameters in Air Blast Modelling

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Abstract:

Jones-Wilkins-Lee (JWL) Equation of State is widely used to describe the expansion of highly compressed detonation gas for explosives in numerical simulation. Various sets of JWL parameters, based on different calibration techniques of the expanding cylinder tests, had been published. However, users of computational fluid dynamics (CFD) tools may not be aware of the sensitivity of the air blast parameters generated from the tools to the JWL parameters used for the inputs. This paper aims to study the various sets of JWL parameters for TNT with the use of numerical simulation software and comparing them with results from the Kingery and Bulmash equations as well as those from a blast trial.

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