

Abstract Submitted
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Modeling of Non-Eroding Penetration Using ALE3D and Zapotec

JAMES CAZAMIAS, UAB, STEPHEN SCHRAMML, ARL — Accurate predictions of non-eroding penetration are becoming of increasing importance to the Army. Sandia's Zapotec (a coupling of Pronto and CTH) has been the code of choice, but there has been some concerns expressed about relying on a single methodology. Consequently, LLNL's ALE3D (which uses a slide line based approach) is currently being investigated for insertion into ARL programs. While simulations of concrete targets would be preferred for comparison purposes, the current state of concrete models precludes this. As a benchmark, we choose to model the penetration experiments of steel projectiles against aluminum targets (Piekutowski, A.J., et al., Int. J. Impact Engng 23 723-734 (1999)) to examine the differences between the two methodologies.

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