

NUMERICAL SIMULATION OF SHOCK INTERACTION WITH CYLINDRICAL CANISTERS

LOTH,E.;BAUM,J.D.;LOEHNER,R.

The objective of this research is to investigate shock interaction with a cylindrical canister suspended over a rigid body complex geometry surface. A new transient, two-dimensional, finite-element shock capturing scheme was utilized. Excellent shock resolution was demonstrated, as well as the efficiency of the newly developed adaptive refinement/coarsening algorithm. In addition to interesting shock wave propagation and interaction processes, the results demonstrated the capability of the new code to capture, and define in great detail, vortices shed from the downstream side of the canister.