

RECENT HEIGHT OF BURST STUDIES OF THE INTERACTION OF IRREGULAR MACH REFLECTION WITH A SIMULATED HEATED LAYER

REISLER,R.E.;KEEFER,J.H.

The results of an experimental effort to study the interaction of an irregular Mach shock and a heated layer are presented. A spherical charge of 1000 pounds of pentolite was detonated at 19.8 feet above the surface to create a shock to interact with a heated layer less than 6 inches in thickness over an instrumented sector of 1600 square feet. A powdered, pyro-chemical made up of magnesium and potassium perchlorate was ignited by a controlled multi-ignition system several milliseconds prior to detonation time to create a layer of hot air with a temperature of approximately 2000 degrees C. Photographic and gauge instrumentation employed on the experiments recorded pressure, temperature, and shock trajectory data.