P65 Soft Capture of Metal Casing Fragments by Low Density Materials

Hutchinson, MD

Imperial College London

Abstract:

In a free-field situation, the mass and initial velocity of bomb casing fragments strongly affect the range at which they can do damage. Even at the low scaled distances relevant to AWE's operations in firing chambers and vessels, the mass, length, velocity and attitude (i.e. pitch, yaw) of fragments reaching chamber or vessel walls together determine the threat they pose to containment.

The timing of casing fracture and the fragment size distribution are also both of considerable interest to AWE. Only by using soft-capture with minimal stress can one recover high-speed fragments, still in their in-flight condition, and allow full evaluation of the threats they pose.

Notes: