

- 3005 Allen W A, Mayfield E B and Morrison H L
DYNAMICS OF A PROJECTILE PENETRATING SAND
Journal of Applied Physics
1957, Vol. 28, pp. 370-376.

The results of an experiment are presented for the case of a nonrotating projectile penetrating randomly-packed sand. Results are interpreted in terms of theories of penetration. See also article 3006.

- 3006 Allen W A, Mayfield E B and Morrison H L
DYNAMICS OF A PROJECTILE PENETRATING SAND, PART II
Journal of Applied Physics
1957, Vol. 28, pp. 1331-1335.

- 3007 Huth J H, Thompson J S and Van Valkenburg M E
SOME NEW DATA ON HIGH-SPEED IMPACT PHENOMENA
Journal of Applied Mechanics, Trans. ASME
1957, Vol. 79, pp. 65-68.

This article presents a summary of some recent experimental work aimed at evaluating the role of various physical parameters in high-speed impact phenomena. Depth of cratering in thick targets is the main interest in this investigation. Impact velocities about 10,000 fps.

- 3008 Bluhm J I
STRESSES IN PROJECTILES DURING PENETRATION
Proceedings Society for Experimental Stress Analysis
1956, Vol. 13, No. 2, pp. 167-182.

Stresses in a projectile during penetration of a thin plate are measured by attaching SR-4 type strain gages to a stationary projectile and firing a plate at the projectile. Force versus time records are obtained at velocities of from 400 to 3000 fps.

- 3009 Craggs J
THE NORMAL PENETRATION OF A THIN ELASTIC-PLASTIC PLATE BY A RIGHT CIRCULAR CONE
Proceedings Royal Society of Edinburg
1951-52, Vol. 63, p. 359.

- 3010 Rinehart J S
SOME OBSERVATIONS ON HIGH SPEED IMPACT
Popular Astronomy
1950, Vol. 58, pp. 458-464.

This article was presented to a meeting of the Meteoritical Society. The results of high speed impact tests are summarized as an indication of the craters formed by the impact of meteors. The meteor crater in Arizona is discussed.

- 3011 Birkhoff G, MacDougall D P, Pugh E M and Taylor Sir G
EXPLOSIVES WITH LINED CAVITIES
Journal of Applied Physics
1948, Vol. 19, pp. 563-582.
- This article summarizes the armor penetration work performed during the World War II with shaped charges. The mechanism of penetration by the jet formed by the liner, and the slug formed by the liner is discussed. Mathematical expressions are developed for the formation of the jet and the slug. Photographs are shown of various penetrations.
- 3012 Gehring J W
OBSERVATIONS ON HIGH SPEED PELLETS AND THEIR IMPACT UPON TARGET PELLETS
B. R. L. Memorandum Report No. 704, 1953 (Unclassified)
Aberdeen Proving Ground, Maryland.
- 3013 Van Valkenburg M E
MODELING OF HIGH SPEED IMPACT THROUGH THE USE OF PLASTICS
1955, OSR Report No. 1, University of Utah.
- 3014 Van Valkenburg M E and Hendricks C D
METHOD FOR PRODUCING HIGH- VELOCITY METALLIC AND PLASTIC PELLETS
Journal of Applied Physics
1955, Vol. 26, pp. 776.
- 3015 Masket A V
THE MEASUREMENT OF FORCES RESISTING ARMOR PENETRATION
Journal of Applied Physics
1949, Vol. 20, pp. 132-140.
- This paper summarizes the experimental and theoretical status of the optical chronograph developed in the course of ballistic research at the Naval Research Laboratory. The instrument together with a simple procedure for analysis of data, is capable of yielding the position velocity and deceleration of a non-plastically deforming small arms projectile during armor penetration
-
- (Author's abstract)
- 3016 Lindsay J L and Masket A V
ULTRA-SPEED TRANSIENT DYNAMIC ANALYZER FOR MECHANICS AND BALLISTICS
Review of Scientific Instruments
1954, Vol. 25, pp. 704-711.