
Registration of deceleration history in a target of geometrically similar projectiles

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The article presents research results of adaptation of piezometry measuring technology to high-speed processes of terminal ballistics. We registered projectile deceleration history for a case of drummer penetration into a target with material erosion at speed over 1000 m/s is received. Features of private option of the technology of terminal ballistics accelerometry developed by the authors and constructive data of the applied special piezoelectric accelerometer ASM-4 are stated. A possibility of mutual recalculation of the current parameters of the same name of the considered processes in the conditions of geometrical similarity was shown with application of the theory of similarity and modeling. Data comparison results of the laboratory and natural (the coefficient of geometrical similarity realized with value 4,33) tests proved validity of recalculation possibility.

Keywords: projectile, terminal ballistics, piezometry, deceleration history, geometrical similarity, recalculation of parameters.

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