Effect of variation of the initial velocity of grenades on the probability of hitting the target

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The article describes a model for calculating external ballistics in the full three-dimensional formulation in the approximation of the dynamics of a material point. Mathematical modeling of the grenade hitting the target was carried out by the method of statistical tests under variations of shooting external conditions. We estimated a probability of grenade hitting the frontal projection of the tank in different modes of shooting from grenade launcher system. It is shown that probability of grenade hitting the target increases significantly when using a jet engine with a system of autoregulation of thrust characteristics.

Keywords: *variation of initial velocity, autoregulation of thrust, pulse engine, external ballistics, demolition of lateral wind, error of weapons aiming, , error of weapons orientation, technical scattering, probability of hitting.*

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