THE DYNAMIC OF IMPULSE CONTROLLED SMALL FLYING OBJECTS

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Abstract. In the paper author analyzed the problem of gasodynamic impulse control systems designed for small flying objects. Author focused on two cases of these objects: an air bomb and a mortar missile. In the paper was described the problem of impulse control small objects dynamic and solutions of control systems for both cases. The presented control system is based on a set of one time used impulse engines. The engines are mounted around the flying object. There are not movable devices on the object board. The correcting impulses from the rocket engines are perpendicular to main symmetry axis of an object and influence directly the centre of gravity of the guided munitions. Author compare results of simulation and field tests for air bombs and mortar projectiles.

Keywords. automatic control, air bombs.