

BALLISTIC RESCUE SYSTEM TESTING

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Abstract. The paper brings operational safety of small UAVs in the area of interest. In this fast growing part of aeronautics where flight performance is a bigger issue than safety.

One of many possible ways to increase safety is use of rescue system. This paper deals with the question if ballistics rescue system GBS 10 developed at VUT Brno in collaboration with, Galaxy GRS and RCE Systems is a suitable system for an increase of passive safety in UAV area.

Since there are no official regulations nor requirements for UAV equipment, the paper defines a possible way of recovery system testing in several steps. The first step is reliability tests for a wide range of environmental conditions. The second step is verification of performance of the main part of the recovery system – the parachute.

The main ambition of this paper is the methodology of tests connecting reliability with flight performance of rescue system for UAVs which can be used as a baseline for the future creation of official regulations . Furthermore, the paper shows step by step develop testing of parachute canopy which started as a student project.