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Conceptual Design of Unmanned Aerial Targets

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Abstract : The contemporary battlefield creates a demand for more costly and highly advanced munitions. Training personnel responsible for operations, as well as an immediate execution of combat tasks, which engage real assets, is unrealistic and economically not feasible. Owing to a wide array of exploited simulators and various types of imitators, it is possible to reduce the costs. One of the effective elements of training, which can be applied in the training of all service branches, are imitators of aerial targets. This research serves as an introduction to the commencement of design analysis over a real aerial target imitator. Within the project, the basic aerodynamic calculations were made, which enabled to determine its geometry, design layout, performance, as well as the mass balance of individual components. The conducted calculations of the parameters of flight characteristics come closer to the real performance of such unmanned aerial vehicles.

Keywords : aerial target, aerodynamics, imitator, performance
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