INCREASING THE FLIGHT SAFETY OF RESCUE DRONES AND HELICOPTERS WITH A DEVICE TO PREVENT BIRDS FROM GETTING INTO THE ENGINES

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Abstract - The implementation of the presented project is important because it will be possible to create a product that ensures the safety of aircraft used in search and rescue operations. This product will be innovative for the aviation field, which will bring significant financial benefits to our country.

There are many vacation spots on the coast of Georgia, and the number of visitors is increasing every year. Many rescue and search operations are carried out in such regions. A number of such operations are planned and carried out using drones and helicopters. In the future, the involvement of various types of drones in rescue operations of this type will increase even more. This is evidenced by the great interest of leading foreign countries in the multi-purpose use of drones.

According to statistics, worldwide demand for search and rescue helicopters and drones has increased significantly. In the recent past, many different types of search and rescue operations were carried out in our country. Unfortunately, some of them did not succeed because the crew members had problems trying to save people's lives because the operation involved high risks. These risks are significantly due to the increased probability of birds getting into aircraft engines.

To avoid the above-mentioned accidents, the only correct way is to protect the motors with special devices. Many manufacturers have begun equipping search-and-rescue helicopters and drones in maritime regions with protective equipment. However, it is worth noting that these nets are made of simple metal constructions that do not provide adequate protection, especially in such biodiversity-rich regions as Georgia. Moreover, the sizes of these meshes are relatively large and cannot stop small birds from crashing, while a smaller size mesh may cause a significant reduction in airflow and thus result in a deterioration of the engine's power characteristics.

Keywords - Drone,Helicopter,Engine,Nets.