



INNOVATIVE DRONE TECHNOLOGY FOR AUSTRIAN AIRLINES AIRCRAFT INSPECTIONS

News / Airlines, Maintenance / Trainings



Since the middle of the year, Austrian Airlines has been testing a completely new technology for the purpose of carrying out technical inspections of its aircraft fleet. The aircraft are checked for paintwork or structural damage by means of autonomous drones developed by the French start-up “Donecle”. This innovation not only reduces the workload for technicians of Austria’s national carrier, but the shorter duration of the checks lasting less than two hours instead of the previous time required of four to ten hours enables quicker availability of the aircraft in daily flight operations.

“Our aspiration at Austrian Technik is to stay up-to-date when it comes to new developments. Innovative systems such as these drones perfectly support us to further enhance our stability in flight operations and avoid flight cancellations”, says Michael Kaye, Vice President Austrian Airlines Technical Operations, commenting on the advantages of the new drone technology.



Drone accelerate checks

The fully autonomous drone will be tested until the end of the year. Under the supervision of an aircraft technician, the drone implements inspections on the exterior of the aircraft in the Austrian Airlines hangar by means of a state-of-the-art, patented laser technology. The system flies autonomously, from takeoff to landing to inspect all areas of the aircraft. The drone takes a high-resolution image every second. On the basis of these images, the accompanying software automatically identifies damage to the structure and paintwork of the aircraft, for example missing aircraft labels. The aircraft technician has the possibility to examine the damage in detail on his tablet and generate a report for the Austrian Airlines maintenance team. The drone does the preparatory work and accelerates the inspection. However, the final decision is made by the certified aircraft technician, who is also given extensive theoretical and practical training in operating the drone.

Drone inspections of the Airbus and soon the Embraer fleet

At present the drone inspections are being carried out on the Airbus fleet of Austrian Airlines, which will grow from 36 to 46 aircraft in the coming years. Austria's red-white-red flag carrier plans to expand autonomous aircraft inspections to other aircraft models in the future. Starting in September, the 17 Embraer planes deployed by Austrian Airlines will also be checked by the new technology. "Another option would be to deploy the drones worldwide in our technical partner companies. In this way we could obtain an accurate picture here in Vienna of paintwork carried out at another location for example", Austrian Technik Head Kaye adds in describing the future potential of the technology.

Idea competition at Lufthansa Systems

The starting point for the use of the new technology at Austrian Airlines was an idea competition held at the Group sister company Lufthansa Systems. The drone provider "Donecle" presented its innovation at a start-up challenge, and subsequently developed potential applications for the autonomous drone in inspecting aircraft in cooperation with Lufthansa Technik. Austrian Airlines serves as a test case within the Lufthansa Group and is further developing the technology together with "Donecle" based on the experience gained from its line operations.



3 laser sensors
Camera resolution: 12 MP
Inspection speed: 1 m / sec.

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