

Austrian Airlines Relies on Innovative Drone Technology for Aircraft Inspections

- **Automation: autonomous drone inspects paintwork damage on Airbus A320 aircraft**
- **Speed advantage: quicker aircraft availability**
- **Expanded deployment: extension of drone inspections to the Embraer fleet in September**

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 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 enables quicker availability of the aircraft in daily flight operations. Now, the checks can be done in less than two hours instead of the previous time required of four to ten hours.

“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,” said Michael Kaye, Vice President Austrian Airlines Technical Operations, commenting on the advantages of the new drone technology.

Drone accelerates checks

The fully autonomous drone will be tested until the end of this year. Under the supervision of an aircraft technician, the drone implements inspections on the exterior of the aircraft in the Austrian Airlines hangar with 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

Currently, the drone inspections are being carried out on Austrian Airlines' Airbus fleet, 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 added in describing the potential of the innovation.

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.

[Click here](#) for a video of the drone inspection.

Austrian Airlines

Austrian Airlines is Austria's leading airline. The once state-owned and still convincing red-white-red airline operates a route network of around 130 destinations. Thanks to its favorable geographical location and Austrian history as a melting pot of the former crown lands, its home airport Vienna Schwechat is still a hub between East and West today. About 120 of the 360 daily flights lead to Central and Eastern Europe. "AUA", as it is often abbreviated in Austria, transports around 14 million passengers a year and employs 7,000 staff from 58 nations. AUA has been part of the Lufthansa Group since 2009. Austrian Airlines is also a member of the Star Alliance, the first global alliance of international airlines. Austrian Airlines has been in the black since 2012. It celebrated its 60th anniversary in 2018.

Here you can find pretty nice photos of AUA and its charming crew: <https://www.flickr.com/photos/austrianairlines>

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