

Bridgestone Aircraft Tire Europe, a member of the Bridgestone Group, a global leader in tires and rubber building on its expertise to provide solutions for safe and sustainable mobility, employs 200 people in Belgium and generates annual sales of more than €135 million. The company is the market leader in commercial aviation in the Europe, Middle East and Africa region.

Created almost 60 years ago, the Belgian aircraft subsidiary of Bridgestone Corporation, supplies new and retread tires for the commercial aviation. Aircraft tires perform under extreme conditions, repeating takeoffs and landings, supporting and enduring the heavy weight and high speed of the aircraft. What's more, an aircraft tire can carry a load of more than 30 tons and has to withstand a speed of 350 km/hour on take-off. In other words, it has to meet the requirements of an F1 car and civil engineering. It is therefore a highly technical tire, and its robustness must be beyond reproach. When it's worn, it can be retreaded multiple times: first the casing goes through various tests such as shearography, leak detection system, then it's buffed, reinforced by fabrics and then fitted with a new tread. Each new life allows the tire to make between 300 and 400 additional landings.



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Thanks to this exemplary recyclability, Bridgestone is developing solutions to support OEMs (Airbus, Boeing, Embraer...) and airlines (Qatar Airways, Emirates, Turkish Airlines, Lufthansa, Wizzair, Ethiopian Airlines, etc.) in maximising flight safety and reducing their CO₂ emissions. Developed 100% in Frameries (Belgium), the easytrack solution uses the barcodes and QR codes attached to tires to locate them throughout their life cycle, eliminating all paper-based maintenance procedures and accurately tracking each tire part, which has a unique serial number. Another solution, the result of a collaboration with Japan Airlines, is a tire wear prediction model. An algorithm designed by Bridgestone uses data communicated by the aircraft to predict when a tire will need to be demounted. This has two advantages: it avoids overstocking and flight interruptions due to lack of foresight.

Bridgestone has also developed the FOD solution for foreign object damage. This refers

to any foreign object such as a maintenance tool, an aircraft part, etc., with all the risks for the aircraft that a tear in the tread entails. This innovation is accompanied by training courses and consultancy services for airlines and airports on the risks associated with FOD. It has even drawn up a map of all the world's airports to raise their awareness, and suggests they organize anti-FOD patrols and install sensors to detect and collect those foreign objects.

Bridgestone is also working to reuse all end-of-life waste such as retread powders that can be revalorized in other applications. In addition, the Frameries plant is the Group's pilot plant for most manufacturing innovations related to aircraft tire retreading: an ultrasound system for detecting micro-leaks, fully automatizing certain specific retreading processes, a new nitrogen curing method, an AI system to improve the reliability of non-destructive tests using shearography, the use of digital twins to model tire behaviour, etc.

Today, Bridgestone enthusiastically promotes its E8 commitment based on 8 values: Energy (for a carbon neutral mobility society), Ecology (to advance sustainable tire technologies and solutions), Efficiency (to maximize productivity through the advancement of mobility), Extension (in favour of nonstop mobility and innovation), Economy (to maximize the economic value of mobility), Emotion (to inspire excitement and spread joy to the world of mobility), Ease (to bring comfort and peace of mind to mobility life), and Empowerment (to contribute to a society that ensures accessibility and dignity for all). Bridgestone Aircraft Tire Europe is setting an example: its CO₂ emissions have been reduced by 50% compared with 2011, and 75% of its tyres are already sustainable, as they are made from recycled and renewable materials. Two concrete examples of its determination to make air mobility and society more sustainable. As evidence of its high sustainability level, Bridgestone Aircraft Tire Europe has been awarded with the Gold Medal by EcoVadis, which ranks the company in the Top5% of the most sustainable companies.





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