

ELECTRIC TAXIING TAKES AIRCRAFT EFFICIENCY TO A NEW LEVEL



EGTS International

Joint venture between Honeywell and Safran.



www.greentaxiing.com

TRADITIONALLY, AIRCRAFT TAXI BETWEEN THE TERMINAL AND RUNWAY USING THEIR MAIN ENGINES, REQUIRING SIGNIFICANT FUEL CONSUMPTION. WITH EGTS, USE OF THE MAIN ENGINES IS NO LONGER REQUIRED, RESULTING IN SIGNIFICANT REDUCTIONS IN EMISSIONS AND NOISE POLLUTION.

Modern jet engines are superbly efficient in the air but are not optimised for ground use. The EGTS system works by using electric motors fitted to the main landing gears.

The system allows fully autonomous aircraft movement on ground, notably eliminating the need for tug tractors for pushback, and requiring use of the main engines only for a few minutes before take-off and after landing (necessary for main engine warm up and cool down). EGTS is particularly geared towards short-and medium-haul aircraft, which spend a relatively long time taxiing in comparison to their time in the air.

Compared with a typical dual-engine taxiing operation, it is estimated that using EGTS will cut CO₂ emissions by 61%, NO_x emissions by 51%, unburned hydrocarbons by 62% and CO emissions by 73%.

The EGTS system was first demonstrated during the Paris Air Show in 2013, when a test aircraft flawlessly completed a number of manoeuvres without using the main engines. In December 2013, Airbus subsequently signed a memorandum of understanding with EGTS International to further develop and evaluate an autonomous electric pushback and taxiing solution for the A320 family.

In early 2014, EGTS sought the advice of pilots themselves, giving more than 30 pilots from around the world the opportunity to 'test drive' the EGTS electric taxiing system in Toulouse. The event gave pilots an early opportunity to evaluate the operational advantages of using the system, by testing the prototype in real taxiway conditions.

TYPICAL USE WITH AN A320 AIRCRAFT IS PREDICTED TO BE EQUIVALENT TO PLANTING UP TO 948 TREES PER AIRCRAFT PER YEAR.

IT HAS BEEN ESTIMATED THAT ON AVERAGE EGTS WILL SAVE AIRLINES AROUND \$250,000 PER AIRCRAFT PER YEAR IN FUEL COSTS.

IN ADDITION TO REDUCED EMISSIONS LEVELS, THE EGTS SYSTEM SIGNIFICANTLY REDUCES NOISE IN THE AIRPORT ENVIRONMENT.