## Increasing Efficiency, Performance and Safety of Aircraft during Takeoff and Landing by Interpreting Electromagnetism

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**Abstract :** Aerospace Industry has evolved over the last century and is growing by approaching towards, more fuel efficient, cheaper, simpler, convenient and safer ways of flight stages. In this paper, the accident records of aircrafts are studied and found about 71% of accidents caused on runways during Takeoff and Landing. By introducing the concept of interpreting electromagnetism, the cause of bounced touchdown and flare failure such as landing impact loads and instability could be eliminated. During Takeoff, the rate of fuel consumption is observed to be maximum. By applying concept of interpreting electromagnetism, a remarkable rate of fuel consumption is reduced, which can be used in case of emergency due to lack of fuel or in case of extended flight. A complete setup of the concept, its effects and characteristics are studied and provided with references of few popular aircrafts. By embedding series of strong and controlled electromagnets below the runway along and aside the centre line and fixed in the line of acting force through wing-fuselage aerodynamic centre. By the essence of its strength controllable nature, it can contribute to performance and fuel efficiency for aircraft. This ensures a perfect Takeoff with less fuel consumption followed by safe cruise stage, which in turn ensures a short and safe landing, eliminating the till known failures, due to bounced touchdowns and flare failure.

Keywords : efficiency, elctromagnetism, performance, reduced fuel consumption, safety

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