

Aircraft Electric Taxiing at Kenneth Kaunda International Airport

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Abstract

This paper examines the merits and challenges of the introduction of an alternative aircraft taxiing method which does not use aircraft main engines for aircraft ground movement at Kenneth Kaunda International Airport (KKIA). The proposed aircraft taxiing method uses electric motors embedded in the nose wheel, left and right landing gears. This is part of the ongoing research and development of the More Electric Aircraft (MEA). The concept and feasibility of introduction of electric taxing at KKIA is done using the current air traffic of KKIA. The study shows the potential for taxiing fuel burn reduction, reduced carbon dioxide, nitric oxide and sound pollution around the airport and potential savings in engine and brake system maintenance costs.

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