Queuing system analysis of landing runways for chosen European airports

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***Abstract*— Nowadays, the most convenient way of travelling is air travelling. The growing number of passengers, air cargo services and other factors triggers airport operators to increase the airport facilities. Airports are faced with an oversaturated runways, which is a typical case of the Heathrow airport. Our findings are based on the queuing system analysis of landing runways for three European airports, i.e. Heathrow, Atatürk and Marco Polo. Findings show that Heathrow airport needs another runway, which was expected especially because of the high passenger frequency, while Atatürk and Marco Polo possess less passenger frequency. Moreover, study argues about runways occupancy, about possibility of building new runways or to maintain the current situation depending on the infrastructure of airport, with the aim to provide fluent flow of people, cargo, and related services. In addition, on one side study discuss about high costs of building a new runways, and on the other side it is related to the reduction of waiting times and fuel costs, providing new employments, increasing cargo transportation and providing better ecological and environmental social responsibilities and also passenger satisfaction.**

***Key words*— Airport, Landing runway, Occupation, Queueing system analysis.**

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