EVALUATION OF EXIT TAXIWAY BASED ON AIRCRAFT TYPES AND FLIGHT SCHEDULE IN JUANDA INTERNATIONAL AIRPORT SURABAYA

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Abstract

Aircraft types had different technical specifications and capabilities, such as runway occupancy time and landing speed. The location of exit taxiway should be chosen to get the ideal point to exit from the runway.

This Final Project will try to determine the number of exit taxiway requirements based on operational characteristics of an airport, include: type of aircraft that operate simultaneously, flight schedules, and direction of movement. Type of aircraft speed influent on the approach speed, runway occupancy time, and percentages arrival or departure. Flight schedules required to determine the priority of runway users. Arrivals generally prioritized in advance if arrival time is similar to adjacent or departure. The direction of movement is a movement in runway adjusted by the direction of the wind.

This Final Project will analyze the needs of the runway by comparing the results of theoretical analysis and actual results as the previous final. Numerical calculations by entering the approach speed formula while landing. From these calculations will be evaluated whether they fulfill the needs of exit taxiway, especially with the new aircraft that have different characteristics.

From the final results, it is known that runway capacity for normal flight conditions in Surabaya Juanda amounted to 47 aircraft operating at peak hour (peak hour), consists of the arrival and departure. While the Hajj season runway was not
able to accommodate aircraft departures, and only produces a total capacity of 32 arrivals aircraft operating at peak hour (peak hour). To be able to dispatch the aircraft, there should be a change of location or increasing the number of exit taxiway at a distance of 2040 m from the end of Runway 10 with 30° angles.

Key words: exit taxiway, runway capacity, Juanda International Airport.